British Columbia

MANUAL OF RESOURCES AND DEVELOPMENT

May 1977

Province of British Columbia

MINISTRY OF ECONOMIC DEVELOPMENT

Parliament Buildings

Victoria, British Columbia

FOREWORD

The purpose of the BRITISH COLUMBIA MANUAL OF RESOURCES AND DEVELOPMENT is to include in one convenient publication a visual presentation along with concise, current data, of the resources and economic activities of the Province. The Manual, as the title suggests, deals with the resources - human, forest, mineral, agriculture, fish and water - of British Columbia and their development. It also contains sections regarding physiography, climate, geology, recreation and other various aspects of the economy of the Province.

The Manual was first published in 1959 by the Economics and Statistics Branch of the Department of Industrial Development, Trade and Commerce. The need for a brochure of this format became apparent from the many requests for information about British Columbia received by the Ministry. It is suggested that the reader use this booklet as a convenient reference for the basic information desired, and to refer to other publications of this and other ministries for broader, more detailed analysis of any particular subject.

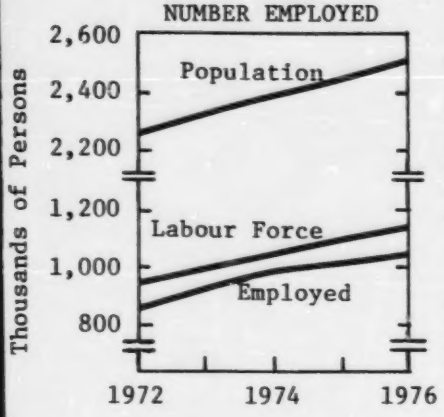
Much of the information contained in this Manual has been collected from other government publications and with the assistance of other ministries, such as the British Columbia Ministries of Environment, Forests, Mines and Petroleum Resources, Agriculture and the Federal Departments of Fisheries and Transport.

ECONOMIC SUMMARY

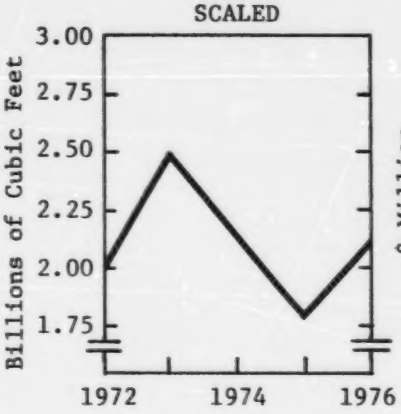
1972 - 1976

101-03458/

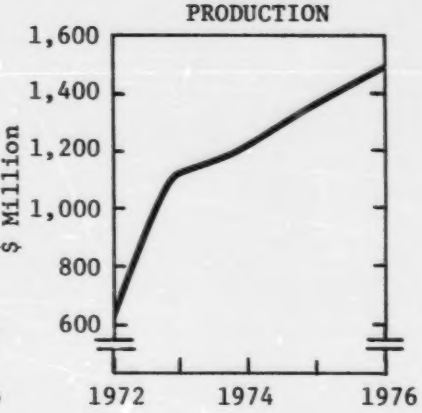
POPULATION LABOUR FORCE AND NUMBER EMPLOYED



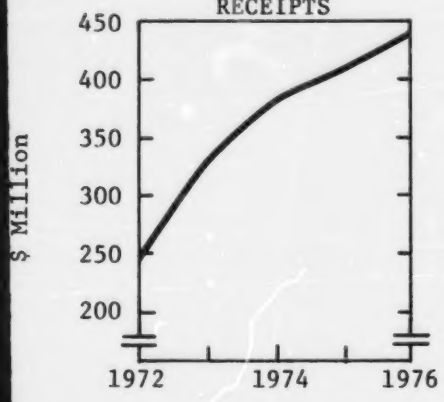
TIMBER SCALED



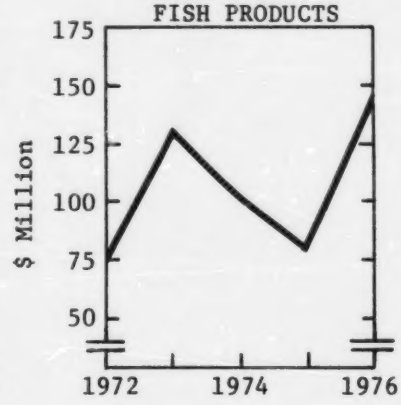
VALUE OF MINERAL PRODUCTION



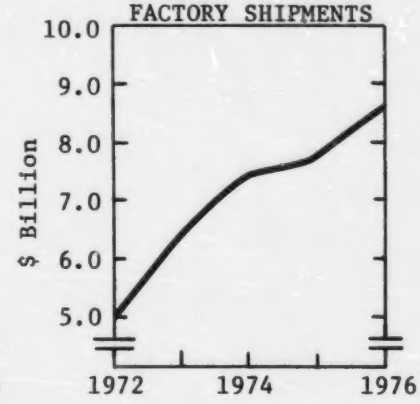
FARM CASH RECEIPTS



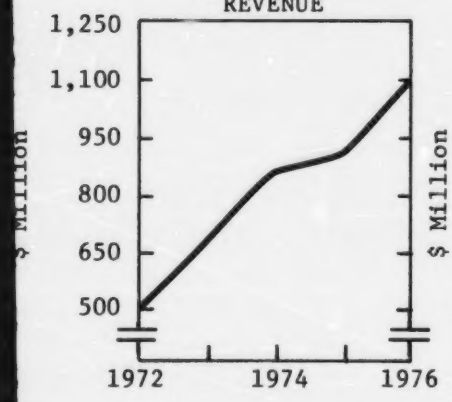
LANDED VALUE OF FISH PRODUCTS



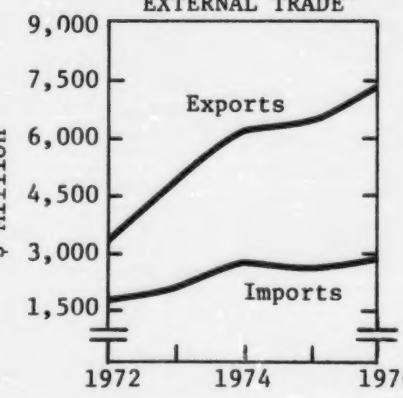
SELLING VALUE OF FACTORY SHIPMENTS



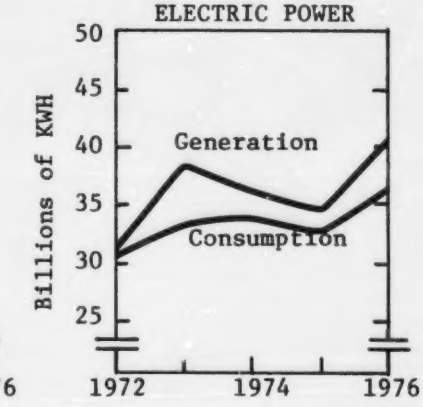
ESTIMATED TOURIST REVENUE



EXTERNAL TRADE[1]



ELECTRIC POWER



[1] Through British Columbia Customs Ports

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development has played an important role in the economic history and growth of British Columbia, and has opened up many of the areas of the Province. Coal was first mined in 1836 on Vancouver Island, placer gold was found in 1857, gold and copper were discovered in 1889, lead and zinc were located at Kimberley in 1892 and gas and oil were found in the Peace River District in the late 1940's.

On July 20, 1871, the Province of British Columbia entered into Confederation with Canada. One of the conditions of the confederation was that a transcontinental railroad be built to join British Columbia with eastern Canada. Completion of the railroad in 1885 brought expanded markets for British Columbia products and manufacturing became increasingly important. Completion of the Panama Canal in 1914 opened new markets in Europe, giving further impetus to the establishment and expansion of pulp, paper and lumber mills, fish packing plants, fruit and vegetable canneries and smelters. Population growth also accelerated as the railroad encouraged greater in-migration of settlers to British Columbia.

Economic activity in British Columbia increased as a result of World War II during which base metals and forest products were in strong demand. Construction of the Alaska Highway by the Americans during the war and subsequent extensions, modernization of equipment and improved services of the Pacific Great Eastern (now British Columbia) Railway proved of great benefit in opening northern and central sections of the Province.

Strong world demand for the products of British Columbia's resource-based industries brought tremendous economic growth following the war. Improved technology in all phases of the forest industry has increased utilization of the Province's forest resources while also increasing efficiency and productivity. This has made possible a larger annual allowable cut without depleting the forests of British Columbia and has permitted the development of large integrated forestry complexes, not only in the coastal areas but also in the Interior including some of the more remote regions of the Province. Similarly, rising demand and technological advances in conjunction with improved efficiences in handling and transportation - unit trains, bulk storage facilities, super cargo carriers - have allowed the development of some of the lower grade ore deposits in the Province, particularly of copper and molybdenum, and vast coal deposits. Agriculture has also benefitted from advanced technology. Irrigation, use of modern machinery and equipment, fruit tree selection, and high standards in poultry and animal husbandry have contributed to greatly improved productivity in this sector.

Historically, the United States and United Kingdom have been the major markets for British Columbia products. In 1967 Japan replaced the United Kingdom as the second ranking single trading partner and has since retained this position. In recent years, other Pacific Rim countries, with approximately half of the world's population, have become important trading partners and represent a high proportion of the current and potential trading volume through British Columbia ports. Trade with the United Kingdom, now a member of the European Economic Community (EEC), now ranks fourth behind total trade with all other EEC countries. Extension of the British Columbia Railway in the northern interior and recent major port developments in the Prince Rupert and Vancouver areas will contribute to the Province's ability to serve expanding world markets.

ECONOMIC HISTORY

The Province of British Columbia entered into Confederation with Canada on July 20, 1871. It has had an exciting and fascinating economic history and has before it a dynamic, rewarding economic future.

British Columbia has an area of 366,255 square miles (94.9 million hectares). It is approximately 900 miles (1,450 kilometres) long and averages 400 miles across. It extends from the 49th parallel on the south to the 60th parallel on the north, and from the Pacific Ocean and the Alaska Panhandle on the west to Alberta's western boundary on the east. The Yukon and Northwest Territories are its northern neighbours and the States of Washington, Idaho and Montana, its southern neighbours.

The earliest reported trade was in sea otter skins to China. This trade began in 1778 when Captain Cook sailed into Nootka Sound on the west coast of Vancouver Island. While he refitted his ships, replacing the rotting masts with Douglas fir timber, the crew gathered skins of the sea otter which abounded in Nootka and along the coast. A ready market for the skins at high prices was found in Canton, China which the expedition visited on its return journey to England. Captain Cook's narrative of the wealth in furs on this coast brought many fur traders and the trade flourished over the next hundred years. Captain John Meares established a trading post at Nootka in 1788 and that year loaded a vessel with furs and a deckload of spars for shipment to China - the first reported trade in timber from British Columbia.

Meanwhile, the great fur trading companies worked their posts westward across Canada, reaching beyond the mountains into British Columbia. Alexander Mackenzie, representing the North West Company crossed overland and in 1793 reached the Pacific Ocean at Bella Coola. The first trading post in mainland British Columbia was Fort McLeod established by Simon Fraser in 1805. He founded Fort St. James on Stuart Lake in 1806 and Fort George at the confluence of the Nechako and Fraser Rivers the following year, all in the name of the North West Company. The North West Company and the Hudson's Bay Company amalgamated in 1821 and in 1843 the Hudson's Bay Company established Fort Victoria as its western depot, anticipating the loss of its earlier western depot at Vancouver, Washington, owing to the Oregon Treaty which in 1846 established the United States - British Columbia border, two hundred miles to the North at the 49th parallel. As the trading posts developed, population increased and agriculture, lumbering and fish processing became established.

The first mechanized sawmill in British Columbia was established in 1848 by the Hudson's Bay Company near Victoria. Pulp production began in 1909, although 1912 is considered the birthdate of the industry when three new plants went into production and newsprint production was started at Powell River. Fraser Mills near New Westminster produced the first plywood in British Columbia in 1913.

The occurrence of the Fraser River gold rush in 1858 attracted thousands of people and Victoria, as the supply centre, was suddenly transformed from a trading post to a city. New Westminster, Hope and Yale also came into prominence as a result of the gold rush. Mineral resource exploration and

PHYSIOGRAPHY

British Columbia, the westernmost Province in Canada, has a most diverse physiography composed of the Cordillera and Great Plains Regions.

The Cordillera in British Columbia consists of the three broad units - the Western System, the Interior System of scattered plateaux and mountains, and the Rocky Mountain System in the east.

The Western System consists of: (1) the Insular Mountains appearing in the Queen Charlotte Islands and Vancouver Island and the St. Elias Mountains in the northwest corner of the Province where Mt. Fairweather (15,300 feet, or 4,663 metres), the highest peak, is found, (2) the Coastal trough forming the east coastal plain of Vancouver Island and the delta plain of the Fraser River, (3) the Coast Mountains which extend northwesterly and average 100 miles (160 km) wide. Rising to the east and south of the Fraser River in the southeast corner of the Western System are (4) the Cascade Mountains.

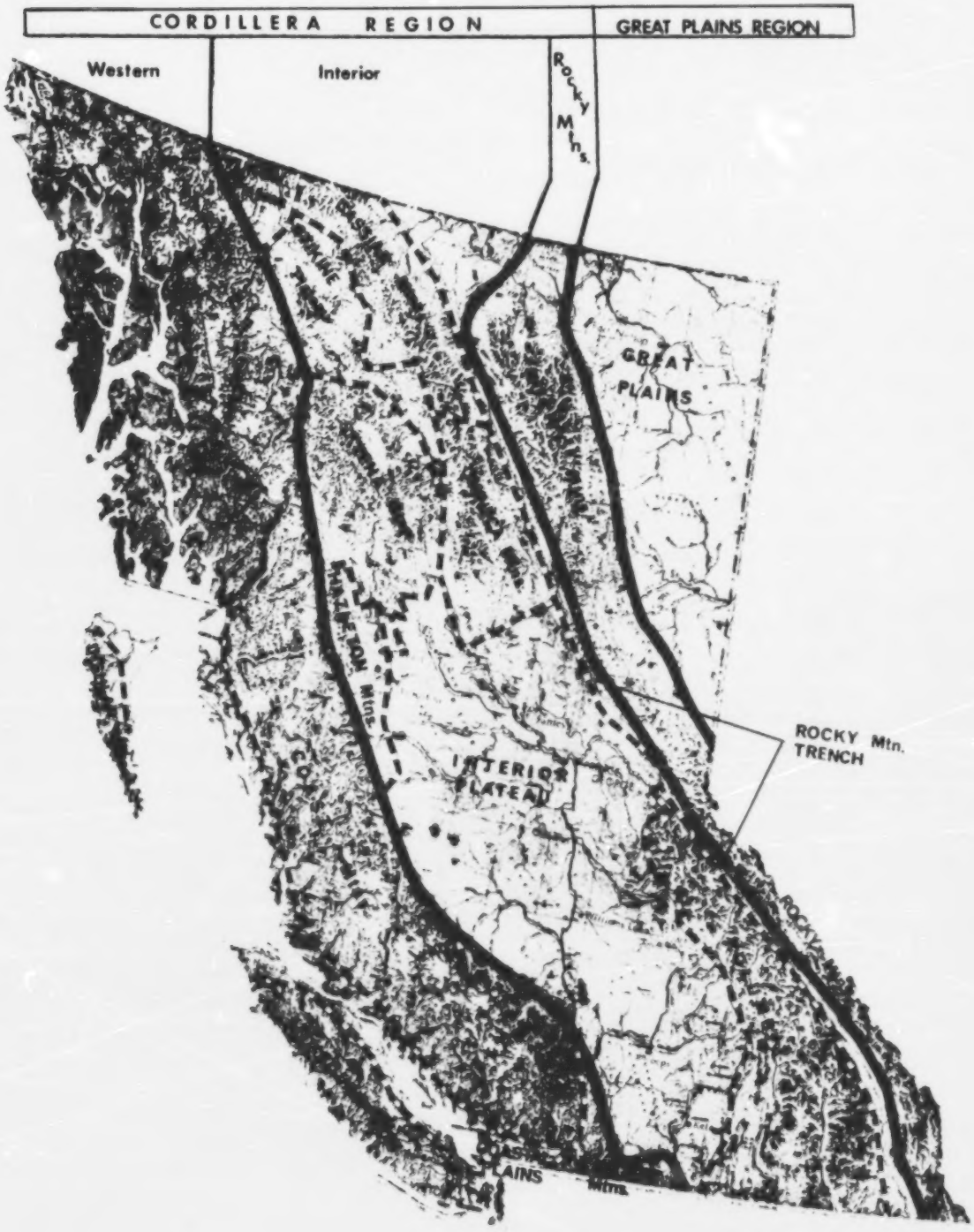
Further inland is the Interior System where the mountains fall off into an extensive interior plateau which, in the south is 30 to 40 miles wide and ranges between 4,000 and 6,000 feet above sea level and broadens to 200 miles and ranges between 2,000 and 4,000 feet elevation in the northern section. The Interior Plateau runs 500 miles in a northwesterly direction and is bound on the east by the Columbia Mountains extending to the Rocky Mountain Trench. The Hazelton Mountains border the northwest section of the Interior System to the Yukon border. The Rocky Mountain Trench runs from the southeast sector of the Province in a northwest direction to the Yukon border. It is 2 to 15 miles wide and contains a series of rivers as well as the Peace River reservoir (Lake Williston).

The Rocky Mountain System forms the eastern wall of the "Trench" and separates the Province of Alberta from British Columbia northwest to the 54th parallel. Mt. Robson reaching an elevation of 12,972 feet is the highest peak in the British Columbia portion of the "Rockies".

The northeast corner of the Province situated between the Rocky Mountains and the 20th meridian is a relatively flat region and is part of the Great Central Plains of North America.

There are many rivers in the Province which drain the interior regions, and rise in the glacial and snowcapped mountains, The Fraser and Columbia Rivers originate in the Rocky Mountain Trench, flow southwestward with the Fraser entering the Pacific Ocean near Vancouver while the Columbia extends south of the border and reaches the ocean in the United States. The Skeena River rises in north central British Columbia, runs southwest and empties into the Pacific Ocean near Prince Rupert. The Peace and Liard Rivers which originate in the Rocky Mountain Trench, are tributaries of the Mackenzie River flowing north through the Northwest Territories to the Arctic Ocean. In addition, there are many large and beautiful lakes in the Province. Babine, Kootenay, Atlin, Stuart and Okanagan Lakes are among the largest natural ones. Williston Lake, created behind Bennett Dam in the Peace River Project, is now the largest lake in British Columbia.

PHYSIOGRAPHY



GEOLOGY

The rock formations of British Columbia range in age from Pre-cambrian to recent, some lava flows being only a few hundred years old.

The Precambrian rocks, chiefly sedimentary, occur in the southeast part of the Province. An extensive belt of metamorphic rock, schists and gneisses of undetermined age, underlies the eastern part of the Interior Plateau and parts of the Monashee, Selkirk, Cariboo, and Omineca Mountains.

Palaeozoic rocks form the main ranges of the Rocky Mountains and underlie much of the country along and west of the Rocky Mountain Trench. Late Palaeozoic sedimentary and volcanic rocks are exposed in a narrow belt that extends northward along the Fraser River to the Omineca Mountains. Similar rocks occur in the northwest, between Atlin and Teslin Lakes.

Rocks of Mesozoic age are widespread. Sedimentary and volcanic formations occur throughout the central part of the Province between the Coast Mountains and the Rocky Mountain Trench, and on Vancouver and Queen Charlotte Islands. Mesozoic sedimentary rocks, mainly Cretaceous in age, occur east of the Rocky Mountain Foothills and along the east coast of Vancouver Island.

Granitic intrusions ranging from small plutons to large composite batholiths of Mesozoic and Early Tertiary age intrude older rocks in a belt corresponding to the Coast Mountains, in another corresponding to the Omineca-Cassiar Mountains, and in an area extending across the southern part of the Province between the Fraser River and Kootenay Lake.

Tertiary rocks, mostly lava flows and associated volcanics, overlie older formations in the Interior and Stikine Plateaus, and on Graham Island.

Mineral deposits are widespread with copper forming the greatest number. It occurs as massive sulphide deposits in the Coast and Insular belts, in porphyries in the Interior belt, and in widely distributed skarn deposits. Copper, molybdenum, and tungsten are associated in porphyry deposits in the Interior. Lead-zinc mineralization occurs as stratiform deposits in the Lake Precambrian and Cambrian rocks of southeastern British Columbia. Silver and silver-lead-zinc veins are localized in the Slocan area. Iron as magnetite occurs mainly in skarns in the Insular belt or associated with porphyry copper in the Interior belt. Gold is widely dispersed in veins and as an accessory in other classes of deposits throughout all mineralized regions.

Oil and gas occur in quantity in Palaeozoic and Mesozoic formations east of the Rocky Mountains in the northeastern part of the Province. Some petroleum exploration has been undertaken on the continental shelf west of Vancouver Island and in Hecate Strait. Extensive coal reserves are present in Cretaceous rocks of the Rocky Mountains and in isolated coal basins in central British Columbia.

The Northern Interior is a vast area where factual meteorological data are very sparse. Such information that is available indicates that long, cold winters and short, cool summers are characteristic. Precipitation amounts are smallest in the western sections in the lee of the coastal mountains and heavier in the foothills and on the slopes of the Rockies.

The Northeast Region is an extension northward of the western prairie region of Alberta. Its climate is definitely continental, and more extreme than the area of Northern British Columbia to the west. However, it does have long hot summers and, in the Peace River Basin, a frost-free period adequate for the growing of crops.

GEOLOGY

LEGEND

- Precambrian - Mainly Sedimentary Rocks
- Metamorphic Rocks - Schists, Gneiss and Quartzite
- Palaeozoic - Largely Sedimentary Rocks
- Mesozoic - (Triassic-Jurassic) Volcanic and Sedimentary Rocks
- Mesozoic - (Cretaceous) Mainly Sedimentary Rocks
- Intrusive Rocks - Granitic and Ultrabasic
- Tertiary - Volcanic and Sedimentary Rocks

CLIMATE

The Coast Region

This region has the abundant rainfall and mild temperatures associated with a maritime climate. Because of the nature of the terrain with high mountains and long fiords, considerable variation does occur. The western slopes are much wetter and cooler (in summer) than the protected eastern slopes. There is a distinct variation, too, from south to north.

Precipitation on the West Coast ranges from 130 to 380 centimetres (50 to 150 inches) per year, with the heaviest falls in the autumn and winter months on the windward slopes. The leeward slopes, particularly the east coasts of Vancouver Island and the Queen Charlotte Islands, have the lowest annual rainfalls. Temperature ranges are least on the outer coast, due to the maritime effect and the frequency of cloud cover, while the sheltered inner coasts are somewhat warmer in summer and cooler in winter. The latitudinal range of mean temperature goes from 10 degrees centigrade (50 degrees Fahrenheit) to 8 degrees.

The Southwest Coast, made up of the Lower Mainland and the southeast coast of Vancouver Island, has a very pleasant climate, and from 65 to 130 centimetres of rain per year. The rain occurs mostly in the fall and winter, and summer can often be a period of relative drought. The area has a long frost-free season and very mild winters.

The Interior Region

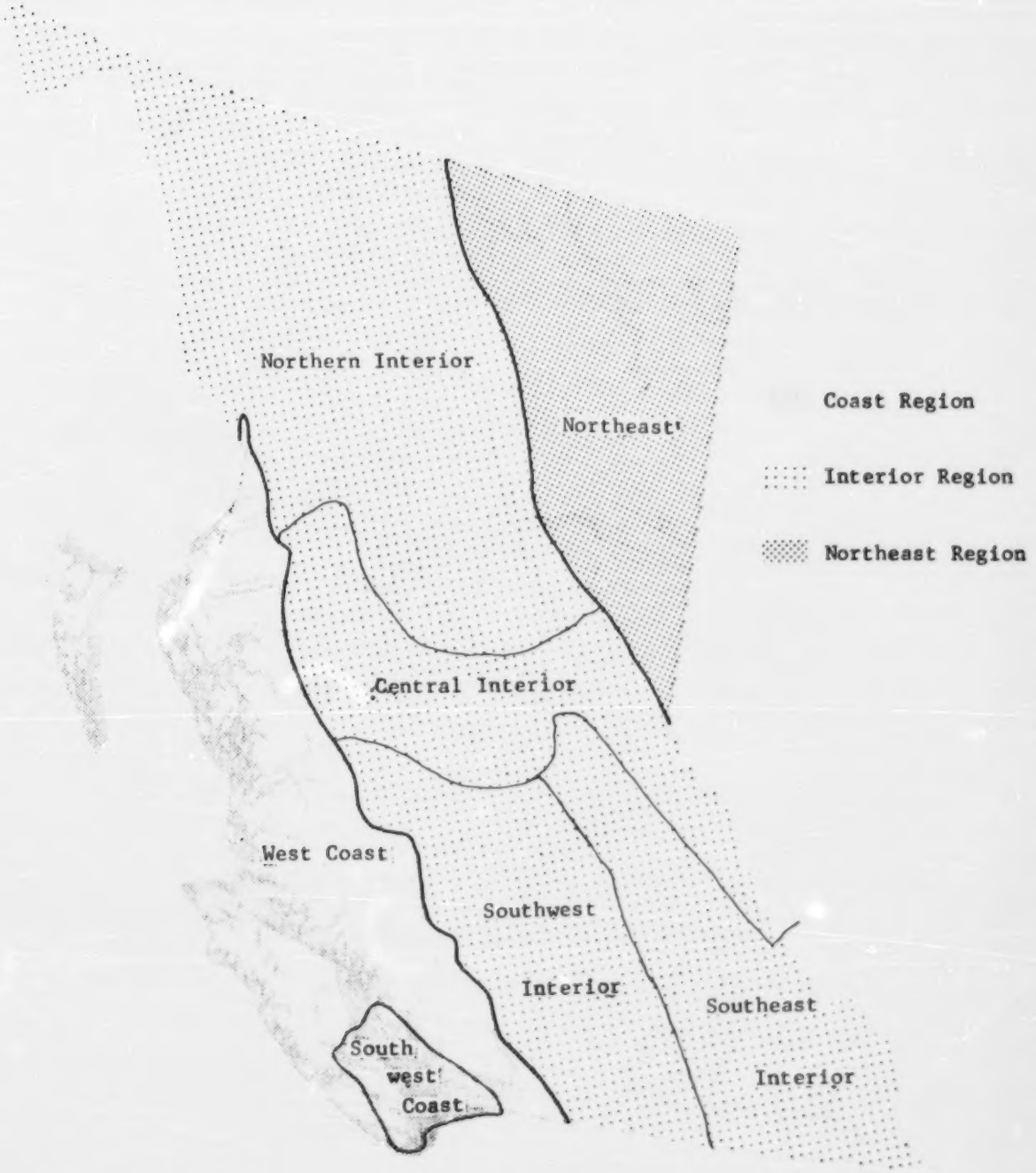
This region, lying east of the coastal mountains and west of the Rockies, has a predominantly continental type of climate but, except for the northern section, not as rigorous as the Canadian Prairies. Considerable variation occurs, especially in winter as the Pacific storms bring relief from more prolonged cold spells.

The Southwest Interior, lying just east of the high coastal mountains, has the driest and warmest climate of the whole province. Annual precipitation ranges from less than 25 centimetres to about 50 centimetres in the valleys. Summer temperatures range up to 38 degrees, while the coldest months have means below zero.

The Southeast Interior, made up of the Columbia Mountain System and associated valleys, has a more extreme climate than the southwest. Although precipitation in the valleys remains fairly light, falls on the ridges are heavy and the mountain passes may receive well over 500 centimetres (200 ins.) of snow in a season. There is the characteristic high annual temperature range of a continental climate from well below zero in the winter to the 38 degree mark in the summer.

The Central Interior section is a land of plateaux and river valleys. It has a distinct continental climate, with more extreme temperatures and higher precipitations than in the south. Extreme temperatures range from the 32 degree mark in summer to as low as 10 degrees below zero in winter. Precipitation is in the 50 to 75 centimetre range, while snowfall usually totals about 190 centimetres for the winter season. The frost-free period is short and unreliable.

CLIMATE


Northern Interior
Northeast
Central Interior
West Coast
Southwest
Interior
Southeast
Interior
South
west
Coast
Coast Region
Interior Region
Northeast Region

FORESTRY

The extensive forest resources of British Columbia have played a dominant role in the economic growth of the Province since the beginning of the forest industry in 1846. A high proportion of the forests consists of softwood species which are in demand throughout the world in the form of lumber, plywood, pulp, newsprint, pulp and paper products, and shingles and shakes. Good forest management under the guidance of the British Columbia Forest Service ensures that a balance is maintained between the amount of timber cut and the forest's ability to reproduce sound wood. This management ensures that the forests of the Province will produce timber on a perpetual yield basis, and thereby continue to contribute to the growth and stability of the British Columbia economy.

In the early days of the industry, logging camps were established along the coast to harvest the timber which was easily accessible by water. Mills were built in protected harbours where log storage and transportation would be facilitated, or where water power could be easily harnessed. Powell River, Port Alberni and Chemainus are such mill centres and are still flourishing.

Extensive development of the Interior forest industry commenced in the years following World War II as markets for forest products increased, as rail and highway transportation reached deeper into the Interior Region, and as technological advances made the harvesting of the small size Interior timber more economic.

The Forest Service estimates that the Provincial forest land covers 128.7 million acres (52.1 million hectares), or 56 percent of British Columbia's total area (about 230 million acres). This forest land supports 2,854.2 million cunits[1] (8,080.2 cubic metres) of mature timber, of which 97.4 percent is highly marketable softwood. Currently 94 percent of the forest land is owned by the Province; 5 percent is in the hands of various companies and private individuals, and the remainder controlled by Federal interests. British Columbia has over one half of Canada's merchantable timber.

The Province may be divided into two forest regions as a result of topographic and climatic conditions. The Coastal Forest occupies the western slopes of the Cascades, the Coast Ranges, the Queen Charlotte Islands and Vancouver Island. Mild winters, moderate summers, and abundant rainfall of over 250 centimetres (100 in.) a year have given rise to very productive forests of Western Hemlock, Douglas Fir, Western Red Cedar, Grand and Amabilis Fir. Hemlock dominates the Coastal Region's species with 41 percent of the mature coniferous inventory. The volume of timber per acre in the Coastal Region averages 5,828 cubic feet.

The Interior forest, east of the Cascades, is comprised of subalpine forest, cariboo parklands, boreal forest. the dry and wet interior belts and the Peace River parklands. The climate is characterized by relatively severe winters and moderately warm summers. The average volume of timber in the Interior is 1,310 cubic feet per acre. The principal species, in descending order by volume, are: spruce (33 percent); lodgepole pine (23 percent); balsam (20 percent); and hemlock (10 percent). (See Table, page 24).

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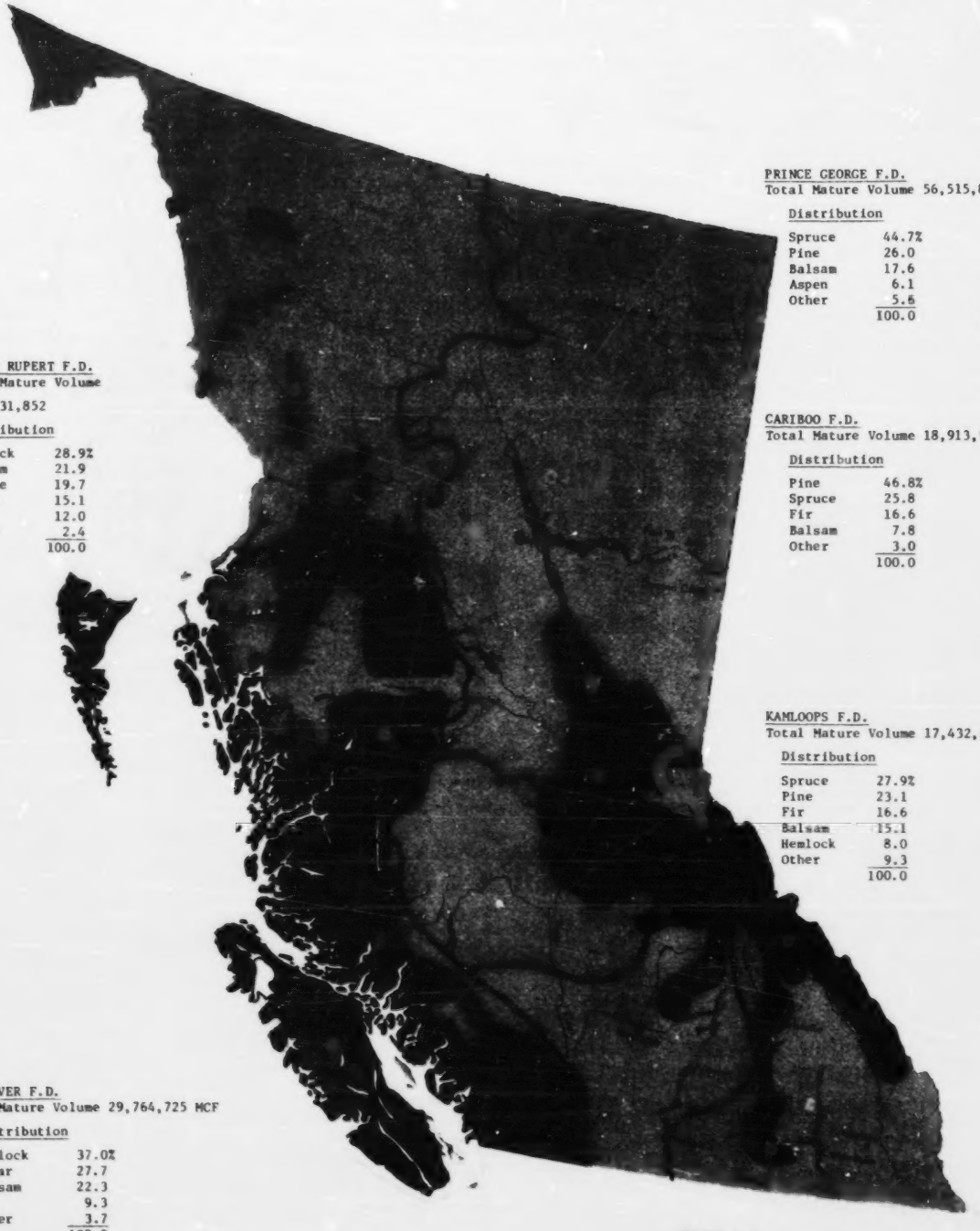
[1] A cunit equals 100 cubic feet.

FOREST RESOURCES - DENSITY

(Land on which the Forest Service can dispose of 1973 timber values)



PRINCE GEORGE F.D.
Total Mature Volume 56,515,883 MCF

Distribution

Spruce	44.7%
Pine	26.0
Balsam	17.6
Aspen	6.1
Other	5.6
	100.0

PRINCE RUPERT F.D.
Total Mature Volume

70,231,852

Distribution

Hemlock	28.9%
Balsam	21.9
Spruce	19.7
Cedar	15.1
Pine	12.0
Other	2.4
	100.0

CARIBOO F.D.
Total Mature Volume 18,913,569 MCF

Distribution

Pine	46.8%
Spruce	25.8
Fir	16.6
Balsam	7.8
Other	3.0
	100.0

KAMLOOPS F.D.
Total Mature Volume 17,432,527 MCF

Distribution

Spruce	27.9%
Pine	23.1
Fir	16.6
Balsam	15.1
Hemlock	8.0
Other	9.3
	100.0

VANCOUVER F.D.
Total Mature Volume 29,764,725 MCF

Distribution

Hemlock	37.0%
Cedar	27.7
Balsam	22.3
Fir	9.3
Other	3.7
	100.0

NELSON F.D.
Total Mature Volume 11,054,036 MCF

Distribution

Spruce	33.9%
Balsam	19.4
Pine	14.1
Hemlock	12.7
Fir	8.2
Cedar	8.0
Other	3.7
	100.0

LEGEND

- 0 to 2,000 cu. ft. per acre
- 2,001 to 4,000 cu. ft. per acre
- Over 4,000 cu. ft. per acre

From an all-time high in 1973 of 2.48 billion cubic feet, the volume of timber scaled in the Province declined to 2.12 billion cubic feet in 1974 and 1.77 billion cubic feet in 1975, largely because of the severely depressed state of world markets. The 1976 cut was 2.11 billion cubic feet, largely in response to improved markets for British Columbia forest products in the United States and in Japan. The 1976 scale represents slightly more than 60 percent of the annual allowable cut in the Province (slightly over 3.5 billion cubic feet), as calculated by the British Columbia Forest Service. Further expansion into the northern interior and higher elevations, as well as the development of hardwood species, is a possibility if warranted by the market for forest products, technological sophistication, and improved access to remote areas. Improved forestry practices, such as juvenile thinning, particularly on the coast, are contributing to the expansion of allowable cuts. Forest nurseries have been expanded substantially, and summer hiring of students has increased to provide for better reforestation.

The report of the Royal Commission on Forest Resources was released in November, 1976. The report contained a number of basic recommendations pertaining to the disposition of timber harvesting rights as they relate to the various forms of tenure. In recognizing the intimate relationship between the evolution of the current tenure arrangements and the prevailing forest industrial structure, Commissioner Dr. Peter H. Pearse made the fundamental recommendation that Forest Service operational planning take place within the framework of overall Provincial economic objectives and development strategy.

The annual allowable cut, stumpage and royalty calculations have also come under review as a direct response to increases in park and recreation areas, more stringent logging guidelines, increased costs associated with the harvesting of more remote stands, and the more inferior quality of those stands. At the same time the logging industry has recorded advances in productivity and utilization levels in woods operations. This has come about through development of specialized equipment for falling and transporting timber. A number of operators have started night logging under powerful arc lights and experiments are being conducted to assess the potential for balloons and helicopters in log transport.

In 1976, an estimated 85,000 persons, or about 8.2 percent of the total Provincial labour force, were directly employed by the forest industry. The total value of shipments of the industry in 1976 was $4.0 billion, up from $3.0 billion in 1975.

Several large integrated forest companies have recently announced significant capital spending plans to upgrade and expand facilities in order to enhance productivity and ensure competitiveness on world markets.

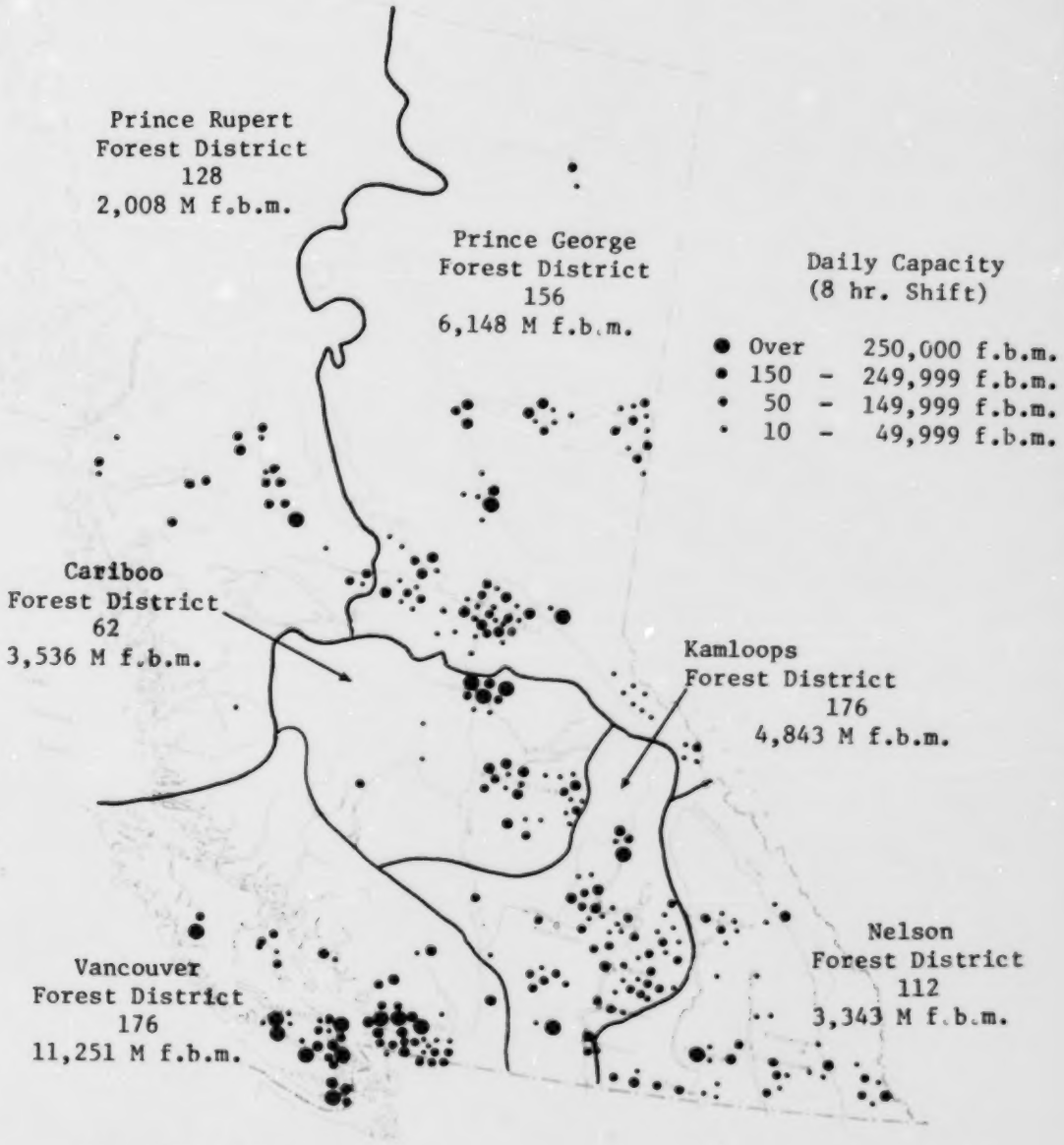
Lumber

Lumber, traditionally, accounts for the greatest portion of British Columbia forest product sales, contributing 35-55 percent of the total value of forest products exports, depending on the demand for lumber in relation to other forest products. Employment in the lumber component represents almost 40 percent of total forest industry employment.

Lumber production in 1976 is estimated at 9.74 billion board feet (23.0 million cubic metres), representing approximately 67 percent of total Canadian lumber production.

SAWMILLS

Number of Operating Sawmills and Total Rated Daily Capacity
in Thousands of Board Feet, 1973
(By Forest Districts)



PROVINCIAL TOTAL

Number of Operating Sawmills	810
Rated Eight-Hour Daily Capacity	31,129 M f.b.m.

Source: British Columbia Forest Service, Victoria.

The United States (particularly the housing market) is by far the most important market for British Columbia's lumber output, traditionally accounting for 55-65 percent of Provincial output. The Canadian domestic market represents British Columbia's second most important outlet for lumber. Japan, the United Kingdom and other countries account for the remaining portion of Provincial output, typically about 15 percent.

Major expansion projects in the sawmill industry in 1976 were, for the most part, confined to small log sawmills, which reflects the increased volume of smaller diameter logs being processed in British Columbia mills. Another trend in recent years has been the centralization of lumber production, particularly to the northern half of the province.

Pulp, Paper and Allied Industries

Reflecting the overall world economic recovery, particularly in the United States, the total value of shipments from the pulp and paper component was an estimated $1.69 billion, up 22 percent from the 1975 level of $1.38 billion.

Pulp production in 1976 was an estimated 5.75 million tons (5.22 million tonnes), up 32 percent from 1975. This amount represented approximately 27 percent of total Canadian production. The United States continued to be British Columbia's largest pulp customer, receiving approximately 32 percent of the 1976 production. The European Common Market (including the United Kingdom) accounted for 39 percent and Japan, 18 percent.

British Columbia's paper production in 1976 is estimated at approximately 2.13 million tons. British Columbia's principal paper product, newsprint, accounted for 68 percent or roughly 1.4 million tons of total paper production. Ninety-two percent of newsprint production was exported, with 72 percent of this amount flowing to the United States market.

Employment in the pulp and paper component was approximately 18,400 in 1976 or 22 percent of total forest industry employment.

No new pulp mills have been constructed in recent years but major expenditures were made on equipment for pollution control and various modernization programs. Several new mills are able to utilize sawdust in their manufacturing process and most new mills are designed to operate exclusively on sawmill residues. As a result the lumber and pulp sectors of the forest industries are becoming increasingly interdependent. The Canadian Cellulose sulphite mill at Prince Rupert is now being converted to sulphate production at a cost of about $100 million, due to poor sulphite markets and unacceptable levels of pollution.

Plywood

British Columbia generally produces some 85 percent of Canada's plywood output and the Canadian market also accounts for 80 percent of the Province's annual production. Reflecting the relative strength of the Canadian housing sector in 1976, plywood output in British Columbia reached an estimated level of 2.14 billion square feet (198.9 million sq. metres), an increase of 20 percent over 1975. Plywood exports traditionally represent a modest 2%-3% of all

PULP AND PAPER MILLS

1. Belkin Paperboard Limited, Burnaby
2. British Columbia Forest Products Limited, Crofton
3. British Columbia Forest Products Limited, Mackenzie
4. Canadian Cellulose Limited, Castlegar
5. Canadian Cellulose Limited, Prince Rupert
6. Canadian Cellulose Limited, Prince Rupert
7. Canadian Forest Products Limited, Port Mellon
8. Cariboo Pulp and Paper Ltd., Quesnel
9. Crestbrook Pulp and Paper Ltd., Skookumchuk
10. Crown Zellerbach Canada Ltd., Duncan Bay
11. Eurocan Pulp and Paper Co. Ltd., Kitimat
12. Finlay Forest Industries Ltd., Mackenzie
13. Intercontinental Pulp Ltd., Prince George
14. MacMillan Bloedel Limited, Annacis Island
15. MacMillan Bloedel Limited, Harmac
16. MacMillan Bloedel Limited, Port Alberni
17. MacMillan Bloedel Limited, Powell River
18. Northwood Pulp and Timber Ltd., Prince George
19. Ocean Falls Corporation, Ocean Falls
20. Prince George Pulp and Paper Limited, Prince George
21. Rayonier Canada (B.C.) Limited, Port Alice
22. Rayonier Canada (B.C.) Limited, Woodfibre
23. Scott Paper Ltd., New Westminster
24. Tahsis Company Limited, Gold River
25. Weyerhaeuser Canada Ltd. Kamloops

forest product exports. The United Kingdom, which represents British Columbia's largest export market, accounted for an estimated 280 million square feet, or 13 percent of British Columbia's plywood output in 1976. The balance of British Columbia's plywood exports generally go to other members of the European Economic Community.

Employment in the plywood component amounted to an estimated 7,800 in 1976, or 9 percent of total forest industry employment. The outlook for plywood in 1977 is for continued strength, although increasing competition from United States' plywood producers is being experienced by British Columbia operators.

Recent technological changes have made possible the utilization of small-diameter logs thus increasing the supply of raw material and making feasible veneer and plywood mills in the Interior.

Shingles and Shakes

Closely following the pattern of lumber and plywood, shingle and shake production was up 20 percent to an estimated 1.45 million roofing squares from the 1975 level of 1.21 million. British Columbia generally accounts for 95 percent of Canada's shingle and shake production, and similar to other British Columbia wood products (with the exception of plywood), the United States represents the largest outlet for this product, particularly the large California market. This component, with some 1,300 workers, accounted for 1.5 percent of total forest industry employment in 1976.

Mature Timber Volumes in British Columbia
(Forest Inventory Statistics of British Columbia, 1973,[1]
British Columbia Forest Service)[2]
(Cunits)[3]

	Coast	Interior	Total British Columbia
Hemlock	485,072,500	163,286,680	648,359,180
Spruce	62,272,100	556,042,570	618,314,670
Balsam	199,734,690	326,499,610	526,234,300
Lodgepole Pine	6,743,040	389,170,700	395,193,740
Red Cedar	263,504,430	59,100,930	322,605,360
Fir	97,484,560	89,827,950	187,312,510
Yellow Cedar	60,737,020	95,560	60,832,580
White Pine	2,476,010	8,083,830	10,559,840
Larch	---	6,720,120	6,720,120
Yellow Pine	5,540	2,841,350	2,846,890
Total Softwoods	1,178,029,890	1,601,669,300	2,779,699,190
Aspen	40,180	46,387,480	46,427,600
Cottonwood	1,975,490	14,251,930	16,227,420
Birch	142,000	7,821,830	7,963,830
Alder	3,499,920	65,150	3,565,070
Maple	346,760	---	346,760
Total Hardwoods	6,004,350	68,526,390	74,530,740
TOTAL	1,184,034,240	1,670,195,690	2,854,229,930

[1] Latest inventory available.

[2] Includes trees over 7.1" (18 cm) diameter at breast height.

[3] 1 cunit = 2.831 cubic metres.

MINERAL INDUSTRY

Early exploration and development of the Province was closely associated with mineral activity. Coal was produced as early as 1836 and placer gold production is recorded from 1851. Many important mines have been discovered and the Sullivan mine, at Kimberley, ranks amongst the largest lead-zinc ore bodies in the world. It is, along with the Pine Point mine in the Northwest Territories, a major source of raw materials for the metallurgical, chemical, and fertilizer complex at Trail.

The unprecedented world demand for minerals, many of which are found in British Columbia, has encouraged continued expansion of the industry. The latest methods of locating, extracting, and transporting minerals have been utilized in this expansion. Discovery through geological deduction, open-pit mining, unitized trains, and deep-sea bulk loading facilities, have all been introduced to British Columbia mining practice.

Although the mineral industry has produced $13.8 billion worth of minerals to date, almost 55 percent of this amount has been produced in the last decade. The value of minerals totalled $1,197 million in 1974, increased to $1,364 million in 1975, and to an estimated $1,486 million in 1976. The major minerals and their percent of total value are: copper, 26.7 percent; coal, 19.6 percent; natural gas, 18.1 percent; oil, 7.6 percent; molybdenum, 6 percent; and zinc, 4.6 percent. The following tables show the amount and value of the minerals extracted in 1976.

British Columbia Mineral Production	1976 Estimate	
	Quantity[1]	Value
		$
Metals		
Copper	273,539,000 Kg	$396,837,000
Gold	5,500 Kg	20,890,000
Iron concentrates	808,300 t	9,090,000
Lead	88,632,000 Kg	33,637,000
Molybdenum	13,955,000 Kg	88,927,000
Silver	255,500 Kg	35,507,000
Zinc	113,265,000 Kg	67,995,000
Others	-	6,557,000
SUB-TOTAL		$659,440,000
Industrial Minerals		
Asbestos	70,500 t	$ 30,719,000
Sulphur	269,000 t	4,595,000
Others	-	5,932,000
SUB-TOTAL		$ 41,246,000

[1] Metric units

... (continued)

MINERAL INDUSTRY

Principal Mines
May, 1976

1. Bell (Copper), Babine Lake
2. Bethlehem (Copper), Highland Valley
3. Boss Mountain (Molybdenum), Big Timothy Mountain
4. Brenda (Copper, Molybdenum), Peachland
5. Cassiar (Asbestos), Cassiar
6. Craigmont (Copper, Iron), Merritt
7. Endako (Molybdenum), Endako
8. Fording (Coal), Fording River
9. Gibraltar (Copper, Molybdenum), McLeese Lake
10. Granduc (Copper), Stewart
11. Granisle (Copper), Babine Lake
12. Highland Bell (Silver, Lead, Zinc), Beaverdell
13. H.B. (Silver, Lead, Zinc), Salmo
14. Island Copper (Copper, Molybdenum), Rupert Inlet
15. Kaiser (Coal), Sparwood
16. Lornex (Copper, Molybdenum), Highland Valley
17. Lynx (Copper, Silver, Lead, Zinc), Buttle Lake
18. Northair (Lead, Zinc, Silver, Gold), Alta Lake
19. Phoenix (Copper), Greenwood
20. Silmonac (Silver, Lead, Zinc), Sandon
21. Similkameen (Copper), Princeton
22. Sullivan (Silver, Lead, Zinc), Kimberley
23. Tasu (Iron, Copper), Tasu
24. Utica (Silver, Gold, Lead, Zinc), Keremeos
25. Western Gypsum (Gypsum), Windermere

(continued)

British Columbia Mineral Production	1976 Estimate	
	Quantity	Value
Structural Material		
Cement	919,000 t	$ 38,499,000
Sand and gravel	-	40,034,000
Others	-	19,790,000
SUB-TOTAL		$ 98,323,000
Coal	7,532,000 t	$291,833,000
Petroleum and Natural Gas		
Crude oil	2,305,400 m^3	$113,390,000
Natural gas to pipeline	855 Mm^3	269,173,000
Others	-	12,723,000
SUB-TOTAL		$395,286,000
TOTAL		$1,486,128,000

Source: British Columbia Ministry of Mines and Petroleum Resources.

Metals

In 1976 metals represented about 46 percent of the value of minerals. Copper production was valued at $396.8 million, up from $331.7 million in 1975, and is a reflection of improved market conditions during the year.

The five largest producers of copper (Lornex, Island Copper, Gibralter,Bethlehem and Similkameen) account for about two-thirds of the total copper production in the Province. At present about 87 percent of the copper concentrates produced are shipped to Japan. The first copper smelter in the Province is now being constructed in the Kamloops area with a capacity of 25,000 tons annually, and is expected to be operational by late 1977.

British Columbia started producing molybdenum in 1964 and by 1976 production was valued at $88.9 million, ranking second only to copper. Two mines are producing only molybdenum, the largest one being Endako, while a number of others produce it in conjunction with copper. The Endako mine is the second largest molybdenum mine in the world.

Over the years, the minerals extracted in the Province varied in importance. Until about 1895 placer and lode gold dominated the mining industry. After 1895, lead and zinc increased in importance to become the leading metallic minerals in terms of value and tonnage extracted, until approximately the mid 1960's when copper took the place of primary importance. The 1976 values of zinc and lead production were $67.9 million and $33.6 million respectively. Over 90 percent of the lead and 61 percent of the zinc

PIPELINES

Main Areas of Oil and Gas Production

Pipelines

Oil ---------

Natural Gas ———————

produced in the Province come from the Sullivan mine at Kimberley. Other major metals produced are cadmium, gold, iron concentrates, and silver.

Industrial Minerals

The value of industrial materials is estimated to have dropped to $41.2 million in 1976 from $48.7 million in 1975. Asbestos is responsible for most of this decrease, falling from $37.8 million in 1975 to $30.7 million in 1976.

Structural Materials

The production of structural materials such as cement, sand and gravel is estimated to have had a value of $98.3 million in 1976, up from $90.9 million in 1975. Cement at $38.5 million was up from $31.7 million in 1975 while sand and gravel, at $40.0 million, rose only fractionally.

Coal

The annual volume of coal production during most of the 1950's and the 1960's was relatively constant, fluctuating in the 800,000 to 900,000 ton range. With the construction of the Roberts Bank Superport and the negotiation of long-term contracts for the sale of metallurgical coal to Japan, the quantity of output increased tenfold to a peak 8.9 million metric tons, valued at $317.1 million in 1975, and declining to 7.5 million metric tons, valued at $291.8 million in 1976. While Japan will remain the major customer for British Columbia coal, new markets are being sought in Eastern Canada and Europe.

The future of coal mining in British Columbia looks bright at present. Major developments in the Northeast, which will likely more than double the present volume of coal production, have reached the advanced planning stages, and a number of other major deposits are presently under investigation.

Petroleum and Natural Gas

All the oil and gas currently produced in the Province comes from the Peace River District which, incidentally, has the thickest sedimentary section so far drilled in Western Canada. A pipeline to transport natural gas from the Peace River area to the Lower Mainland was built in 1957 and subsequently extended eastward through the Okanagan to the Kootenays and westward to Kitimat and Prince Rupert. The northern end of the line has been extended beyond the northern Provincial boundary. Crude petroleum production totalled 2.3 million cubic metres in 1976, up 43.4 thousand cubic metres from the previous year. The natural gas delivered to pipeline totalled 855 million cubic metres (Mm^3) in 1976, of which more than half is exported to the United States.

Normal depletion and the lack of new discoveries is responsible for the decline from peak production levels of crude oil and natural gas in 1970 and 1973, respectively. With improved unit prices, particularly for natural gas, now being received by producers, bids for exploration and development rights increased dramatically in 1976. The outlook for further exploration and development in the northeastern part of the Province is very encouraging.

AGRICULTURE

Agricultural development in British Columbia has been limited by the physical and climatic characteristics of the Province, but advanced farming technology and the use of modern machinery and equipment, plus high standards practised in poultry husbandry, livestock breeding and fruit tree selection techniques have enabled agriculture to maintain prominence in the Provincial economy. British Columbia's agricultural products are competitive in world markets because of high standards of quality, good packaging and, in the case of tree fruits, high yields per acre. The dairy herds in British Columbia are among the most productive in Canada and the Province's beef cattle are widely sought after for breeding stock.

Crop cultivation is limited to arable lands along the river valleys which are separated by mountain ranges. Extensive upland areas provide range land for grazing livestock. The wide variation of physiography, soil and climate in the Province has given rise to other types of product specialization by region. The Okanagan Valley, prior to irrigation, was cattle range land but now produces over 90 percent of the tree fruit crops grown in the Province. The Peace River-Liard region accounts for 90 percent of the total grain harvested. The Lower Mainland-Vancouver Island area yields the bulk of dairy products, berry crops, vegetables, poultry and eggs. The Southern and Central Interior region is the centre of the beef industry.

Specialty crops such as bulbs, cut flowers, ornamental shrubs, filberts and mushrooms are also important to the Lower Mainland while the grape growing industry is gaining importance in the Okanagan Valley.

According to the 1971 Census (latest data available), British Columbia has approximately 6.5 million acres (2.6 million hectares) of arable land (about 3 percent of the total acreage) and an estimated 11 million acres of range land (4.4 million hectares). Farm area increased almost 30 percent from 1961 to 5.8 million acres in 1971 but the number of farms decreased by 7.7 percent over this same period, reflecting a national trend to larger farm units.

Farm cash receipts in British Columbia totalled approximately $436 million in 1976, up 7.6 percent from 1975. The value of major agricultural products and their percent of total value are as follows: dairy products, $106 million (24 percent); livestock, $91 million (21 percent); poultry products, $84 million (19 percent); fruit and vegetables, $76 million (17 percent); and grain, $21 million (5 percent).

The value of major primary agricultural product groups exported in 1975[1] are estimated at: fruit and vegetables and related products, $13.4 million; live animals, $3.2 million; fodder and feed, $15.5 million. Fresh applies constituted the major single export commodity at $10.1 million, most of which went to the United States. The United States, United Kingdom, and Japan are the major importers of British Columbia agricultural products.

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[1] Latest available figures at time of publication.

MAIN FARMING AREAS

LEGEND

Main Farming Areas

Range Lands

FISHING

British Columbia's commercial fishing fleet in 1975 was valued at $270.6 million, and numbered 7,528 vessels compared with 7,084 in 1974. Between 11 and 12 thousand people work on these boats each year. In addition the industry supports a large number of shoreworkers in fish processing plants and shipyards. Twenty-one salmon canneries were operating in 1976, and a number of smaller fish-processing plants were engaged in the production of specialty products such as canned herring, salmon roe (caviar), smoked cod, salmon and oysters. In recent years, the fishing industry has become centralized in Prince Rupert and the Lower Mainland.

The total value to the fishermen of fish landings in 1975 is estimated at $79.7 million, for a wholesale market value of $167.0 million. In the past five years, salmon has comprised between 60 and 80 percent of the wholesale value of all fish products, most of it being sold canned or frozen. Herring is the second most important species, with a wholesale value of $34.9 million in 1975. Herring roe, which is exported to Japan, and herring frozen for food account for most of the wholesale value of the herring caught in the Province. Cod, halibut and shellfish are together comprising an increasingly important proportion of the annual value of the British Columbia fish catch. British Columbia exports of fish and marine products in 1975 were estimated at $123.1 million. Major markets for fish products were Japan, 30 percent; United States, 18.3 percent; France, 15.8 percent; United Kingdom, 14.4 percent.

The marine industry is showing signs of further diversification with the harvesting of kelp and other seaweeds. Kelp resources totalling 66,390 harvestable tons were located in Nootka Sound in 1975. An inventory of substantial quantities of seaweeds is being undertaken by the British Columbia Marine Resources Branch and Federal Fisheries and Marine Service. These resources could provide a sustainable harvest for a small, but potentially significant new British Columbia industry.

The Federal Department of Fisheries, in conjunction with the British Columbia Marine Resources Branch, is currently engaged in a salmon enhancement programme designed to double the stocks of Pacific salmon by 1980. The programme, expected to cost in excess of $250 million, will get underway in mid-1977.

A policy of developing culture technology in the growing British Columbia oyster industry has been pursued by the Provincial Marine Resources Branch in order to improve productivity and to reduce industry dependence on erratic wild oyster stocks. Other recent developments in the British Columbia fishing industry include the development of a herring sex-sorter, expected to increase the utilization of male herring, and a new incubation system using gravel-filled boxes, which shows substantial increases in salmon-fry survival over that achieved in natural conditions.

On January 1, 1977, Canada extended its jurisdiction to 200 miles from its shoreline. The new limit, by controlling the activities and sizes of catch by foreign fishermen, is expected to have a very beneficial effect on size and quality of our fish stocks. The Licence Control Programme for commercial salmon vessels in British Columbia, initiated in 1968 in order to maintain average earnings in the industry, has resulted in a continuing drop in the number of operating salmon vessels from 5,596 in 1973 to 5,028 in 1975.

FISHING INDUSTRY

Wholesale and Landed Value of Fish and Fish Products in British Columbia 1971-1975
($'000)

Year	Wholesale Marketed Value					Landed Value[1]
	Salmon	Halibut	Herring	Other	Total[1]	
1971	96,926	11,367	2,256	9,540	120,089	58,588
1972	114,349	16,904	12,612	15,267	159,132	75,128
1973	221.642	12,903	34,641	14,751	284,997	130,409
1974	165,841	6,996	29,856	17,759	220,452	100,976
1975	99,748	12,873	34,867	19,330	167,018	79,681

[1]Includes halibut landings by British Columbia fishermen at U.S. ports.

Main Fish Processing Plants

1. B.C. Packers Ltd., Namu
2. B.C. Packers Ltd., Vancouver
3. B.C. Pakers Ltd., Steveston
4. Gulf of Georgia Oyster Co-op, Qualicum Beach
5. Central Native Fisherman's Co-op, Bella Bella
6. Norpac Fisheries Ltd., Vancouver
7. Prince Rupert Fisherman's Co-op, Prince Rupert

Major Fish Processing Plants

Major Fishing Areas

Salmon Fishing Grounds

Principal Salmon Spawning Areas

WATER RESOURCES AND ELECTRIC POWER

Water Resources

Approximately one third of Canada's water flows in British Columbia, contributed by an estimated long-term average annual British Columbia runoff of 800 million acre-feet. The Province's water resources, in addition to providing necessary electric power for the industrial development of British Columbia, have contributed in many other ways to the economy. These include providing sufficient water supply for domestic use, transportation, recreation, controlled irrigation for agricultural use and meeting the requirements of large volumes of water of many industries such as the pulp and paper industry.

The agriculture industry is the greatest user of water in the Province. Some 400,000 acres of land are irrigated with licensed diversion of 970,000 acre-feet in 1974. The best soils for agriculture are located on the narrow flood-plains of British Columbia's fast moving rivers. This has led to the most extensive dyking system in Canada, protecting some 230,000 acres of land from flooding.

Flood control and pollution control are the responsibility of the Water Resources Service of the Ministry of the Environment. The Pollution Control Act was enacted in 1967 and is administered by the Pollution Control Branch which is actively examining all existing and proposed means for the disposal of sewage and waste materials to ensure a continued volume of pure water in all domestic, recreational and industrial activities in the Province.

Electric Power

The total generating capacity in British Columbia, as of January 1, 1976, was 8,319.4 megawatts (MW)[1]. Of this, 6,466.7 MW was owned by three utilities - British Columbia Hydro and Power Authority, West Kootenay Power and Light, and the City of Nelson, while the remaining 1,852.7 MW was owned by private companies, the largest of which were Alcan (818 MW), Cominco (668 MW) and MacMillan Bloedel (155 MW). The table below summarizes the electrical capacity of the utilities and industry in this Province.

Installed Electric Generation Capacity in British Columbia[2]

Producer	Installed Capacity (MW)
British Columbia Hydro	6,416.0
Alcan	818.0
Cominco	668.0
Pulp and Paper Industry	293.0
Mining Industry	66.2
West Kootenay Power	42.0
City of Nelson	8.7
Other Industry	7.5
Total	8,319.4

[1] One megawatt equals one thousand kilowatts.

[2] Source: British Columbia Energy Commission, February 1976.

ELECTRIC TRANSMISSION SYSTEM

Of the 8,319.4 MW of installed electrical generating capacity, over 6,000 MW, or approximately 75 percent, comes from hydroelectric plants. The fortunate combination of numerous rivers and mountainous terrain has endowed British Columbia with an immense water power potential. Although much development has already taken place, the balance available is relatively undiminished, and it is evident that hydropower will continue to play an important part in the future economic growth of the Province. According to a 1975 inventory of principal undeveloped hydropower sites, British Columbia had an estimated potential generating capacity of 20,960 MW of firm power. This estimate of gross available power is very likely to be revised upward as the increasing prices of fossil fuels make the development of smaller-scale hydroelectric plants economically more attractive. Not all of the potential will be developed. Some of the technically promising sites are in regions of difficult access, while others could create serious environmental problems.

The British Columbia Hydro and Power Authority is presently engaged in a large-scale expansion of its generating network. Units 3 and 4 on the Kootenay Canal, rated at 202 megawatts (MW) each, are expected to be in service before the end of 1976. Unit 3 on the Mica Dam is scheduled to enter service in the spring of 1977 and unit 4 in the fall. Units 5 and 6 will be implemented as required at a later time. All six turbines are rated at 435 MW, giving Mica an ultimate capacity of 2,610 MW.

Construction is also proceeding on the Seven Mile dam on the Pend-d'Oreille River near Trail and on the Peace River Site 1 project. Both are scheduled for completion in 1980 and each has a total ultimate capacity of 700 MW. The Revelstoke Dam project, approved by the Water Rights Branch December 3, has been initiated by British Columbia Hydro. The project, scheduled for completion in 1981, will have an ultimate generating capacity of 2,700 MW.

British Columbia Hydro is also proceeding with plans to link up the Prince Rupert/Terrace/Kitimat power grid with the main grid serving the rest of the Province. The link will be completed by 1978. Hat Creek coal deposits are being studied to determine the feasibility of their use for thermal generation of electricity. The generating plant at Hat Creek would have an ultimate capacity of 4,800 MW, and an economic life of 35 years. Preparatory environmental studies of the Site C project on the Peace River have been commissioned for a possible water license application. Another potential hydroelectric project is the possibility of diverting a portion of the McGregor River into Williston Lake to increase the energy producing capacity of the W.A.C. Bennett Dam, and other potential Peace River dams.

RECREATION

Recreational activities are abundant in British Columbia which is renowned for its spectacular scenery, numerous lakes, coastal waterways and plentiful stocks of fish and game. Some of the more popular activities are camping, boating, fishing, hunting and skiing.

The Province had 341 parks, 20 recreation areas, and one wilderness conservancy as of July, 1976, with a total area of 4.4 million hectares (11.2 million acres), plus five national parks (Glacier, Yoho, Pacific Rim, Kootenay and Mount Revelstoke), with a total area of about 0.5 million hectares (1.2 million acres). An estimated 8.8 million visits were made to Provincial parks in 1976, of which about a fifth were overnight visitors.

Provincial parks range from wilderness areas, where natural conditions are preserved as much as possible, to main highway camping and picnic sites. The five largest parks, offering a variety of natural experiences and overnight facilities are Tweedsmuir, Wells Gray, Strathcona, Mount Robson and Garibaldi. Others offer unique features such as the ancient rock carvings in Petroglyph Park, the nature houses at Manning, and the chain of lakes for canoeing enthusiasts in Bowron Lake Park. There are also marine parks, such as Desolation Sound Marine Park, which preserve large portions of British Columbia's numerous fjords for the yachting public.

Boating of all kinds, including cruising, sailing, skindiving, fishing and water skiing, is growing at a tremendous rate. There are seventeen Provincial marine parks in the lower and mid-coast areas and an increasing number of marinas and related service facilities.

In British Columbia excellent year-round salt and fresh water fishing is available. Spring and coho salmon are the chief salt water sports fish. Chinook (spring) salmon (called tyee when over 30 lbs.) and coho (generally smaller but more numerous) are found in all coastal waters. The Kamloops or rainbow trout is the most important fresh water sports fish and can be found throughout the Interior. While an average Kamloops trout weighs about one and a half pounds, bigger ones are caught in the larger Shuswap and Kootenay Lakes. The steelhead, a sea-going rainbow trout, is only fished for in rivers and streams.

British Columbia provides hunters with a wide variety of quarry ranging from uplands birds to big game. Each year there are approximately 145,000 resident and 5,000 non-resident hunters. The most widely hunted upland game birds are grouse and pheasant, while duck shooting is the most popular waterfowl sport. The most hunted of the larger game are moose and deer but other big game species hunted include elk, caribou, black and grizzly bear, bighorn and thinhorn sheep and mountain goats.

The growing popularity of skiing in British Columbia is reflected by the increased development of alpine areas, the major regions being the Lower Mainland, southern Interior and Kootenays. Located near Vancouver are Grouse Mountain, Mount Seymour and the Garibaldi area. Approximately 60 miles (80 kilometres) north of Vancouver is the famous Whistler Mountain ski area, popular with skiers from all over Canada. Major Interior sites include

Tod Mountain (Kamloops), Silver Star (Vernon), Big White (Kelowna) and Apex (Penticton). In the Kootenays, international championships are often held at Rossland or Revelstoke. Popular skiing areas on Vancouver Island are located at Green Mountain (near Nanaimo) and Forbidden Plateau (near Courtenay).

MAJOR PARKS

PROVINCIAL PARKS

1. Atlin
2. Bowron Lake
3. Cape Scott
4. Carp Lake
5. Cathedral
6. Desolation Sound Marine Park
7. Elk Lake
8. Garibaldi
9. Golden Ears
10. Hamber
11. Kokanee Glacier
12. Kwadacha
13. Manning
14. Monashee
15. Mount Assiniboine
16. Mount Edziza
17. Mount Robson
18. Mount Seymour
19. Muncho Lake
20. Naikoon
21. Okanagan Mountain
22. St. Mary's Alpine
23. Silver Star
24. Stone Mountain
25. Strathcona
26. Tatlatui
27. Top of the World Park
28. Tweedsmuir
29. Wells Gray

NATIONAL PARKS

A. Glacier
B. Kootenay
C. Mount Revelstoke
D. Pacific Rim
E. Yoho

TRAVEL INDUSTRY

Tourism continues to be one of British Columbia's most dynamic industries as evidenced by the trend of tourist expenditures since the 1960's. Tourist revenue in 1961 was $115 million, while in 1976 an estimated $1.11 billion was spent. Employment in tourist-related industries in British Columbia is approximately 70,000 or 7 percent of the labour force. The approximate breakdown of tourist spending, according to recent studies* is as follows: 30 percent for food; 25 percent for travel; 20 percent for lodging; 17 percent for shopping and about 16 percent for recreation, entertainment and miscellaneous expenditures.

Approximately 10,000 business enterprises, particularly those engaged in the service and retail trades, depend heavily on travel industry revenue. Resorts, fishing and hunting camps, dude ranches, and guide services are entirely dependent on tourism.

Conventions make up an important part of the travel industry and in 1975 brought to the province a total revenue of $40 million, an increase of 25 percent over the 1973 level. More conventions are held in the off-season months during spring and fall and the major convention centres are Vancouver, Victoria, and Penticton.

Tourism British Columbia reported that 2,037 tourist establishments providing 71,564 accommodation units were registered with its office in 1976. Mobile tourist accommodations have become an important alternative to hotels and motels in recent years, as the various types of recreational vehicles become increasingly popular. Approximately one in every four motoring parties arriving in the Province is travelling in a recreational vehicle. Parks Branch statistics show that in 1975, 8 percent of the overnight visitors to Provincial parks were in motor homes; 26 percent were in camper vehicles, 18 percent in full trailer units, and 14 percent in tent trailers.

Yachting is also a favourite form of recreational activity. Because of its ideal boating environment, British Columbia has developed into one of North America's leading centres for recreational boating. In 1975, nearly 36,000 cabin cruisers and sailing yachts were cleared by Customs for entry into British Columbia waters.

The rapid growth of the travel industry can largely be attributed to more leisure time and an increase in motor vehicle travel with a vastly improved and extended highway network. Heavy traffic is experienced along the northern trans-provincial highway, the Yellowhead route and through the Rogers Pass. Increased development of winter travel has also occurred with an increase of up to 30 percent in some areas due to the growth of the ski industry.

Greater Vancouver, with a metropolitan area population of over 1.1 million people, attracts large numbers of visitors because of its natural scenic attractions, such as Stanely Park and Capilano Canyon, its proximity to outstanding year-round recreation areas, and a vibrant and varied night life in places such as Gastown.

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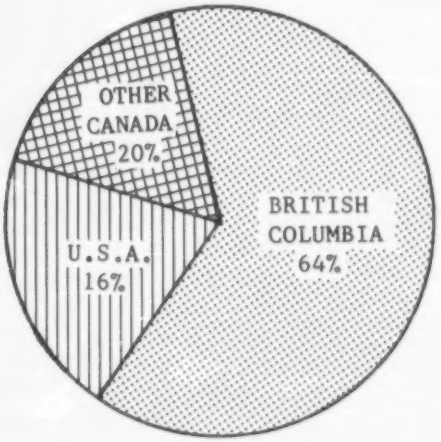
* Visitors '74 (1974) and British Columbia Resident Travel Survey (1976) - surveys dealing with visitor and resident travel characteristics.

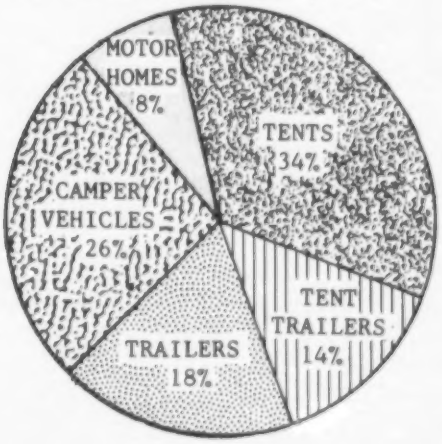
TRAVEL INDUSTRY

(VISITORS TO PROVINCIAL PARKS)

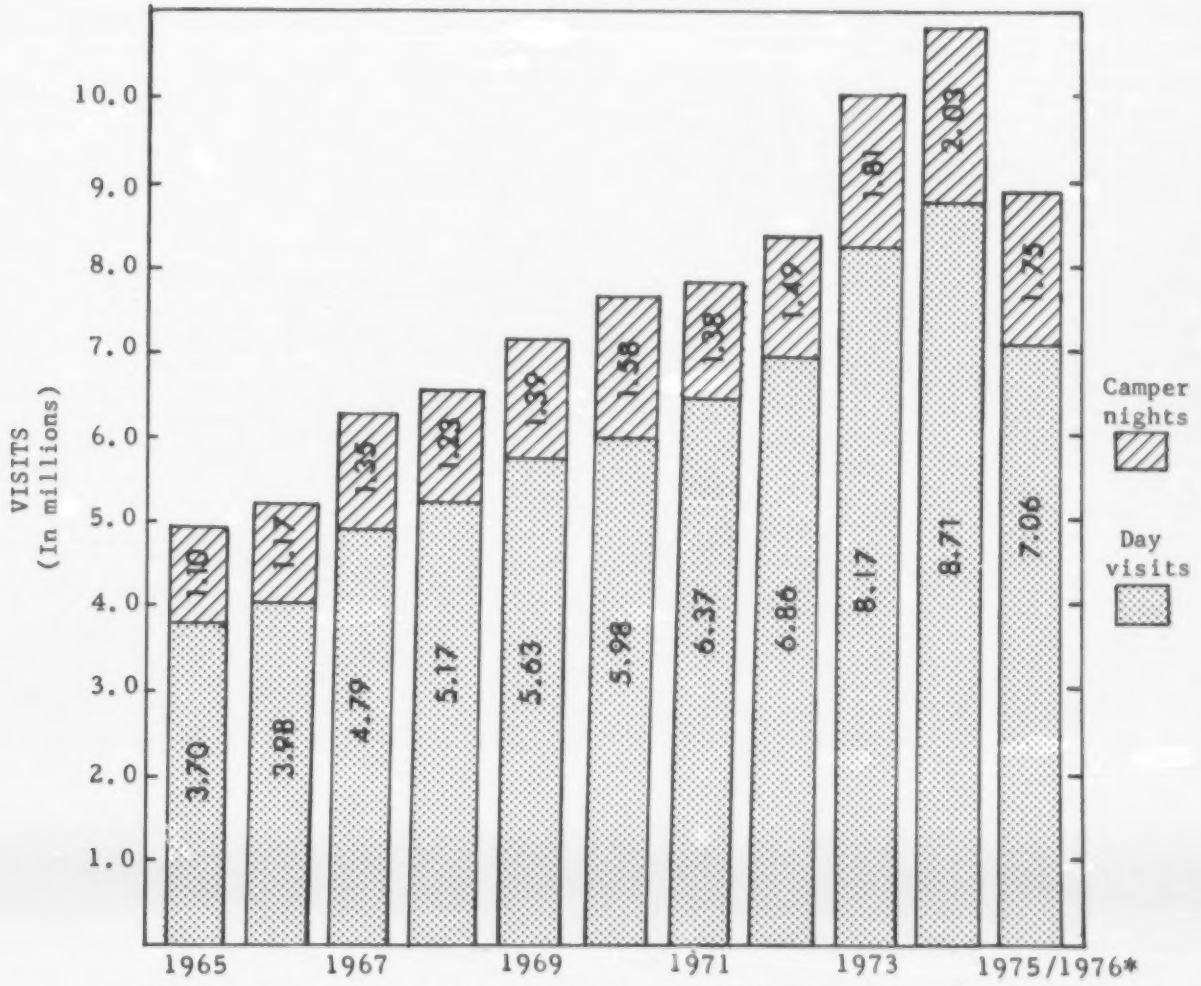
ORIGIN OF CAMPERS, 1975



TYPE OF ACCOMMODATION, 1975



VISITORS TO PROVINCIAL PARKS



* The number and type of park visits in 1976 were approximately the same as in 1975.

Victoria is known for its mild climate, fine gardens (Butchart's Gardens being world famous), Parliament Buildings and Provincial Museum and Archives. Penticton, Kelowna and Vernon are the chief tourist centres in the Okanagan. The rest of the Province contains a multitude of scenic and recreational attractions and offers many points of historical interest such as the reconstructed gold-rush town of Barkerville, and Fort Steele, an early North West Mounted Police garrison near Cranbrook. Hydro-electric dam developments are also great attractions to visitors.

Interesting annual events around the Province include the Pacific National Exhibition in Vancouver, which is North America's fourth largest fair, the Abbotsford International Air Show and the Nanaimo Bath Tub Race which attracted entrants from places as distant as Australia this year. Other major annual attractions are the Logger Sports Series held in Squamish, Mission and Sooke, the Swiftsure Lightship Classic yacht race in Victoria, the Kelowna International Regatta and the Penticton Peach Festival.

MANUFACTURING

The value of shipments by British Columbia factories in 1976 was estimated at $8.8 billion, 21.0 percent greater than in 1975. Manufacturing employment was approximately 170,000, comprising approximately 16 percent of total employment in British Columbia.

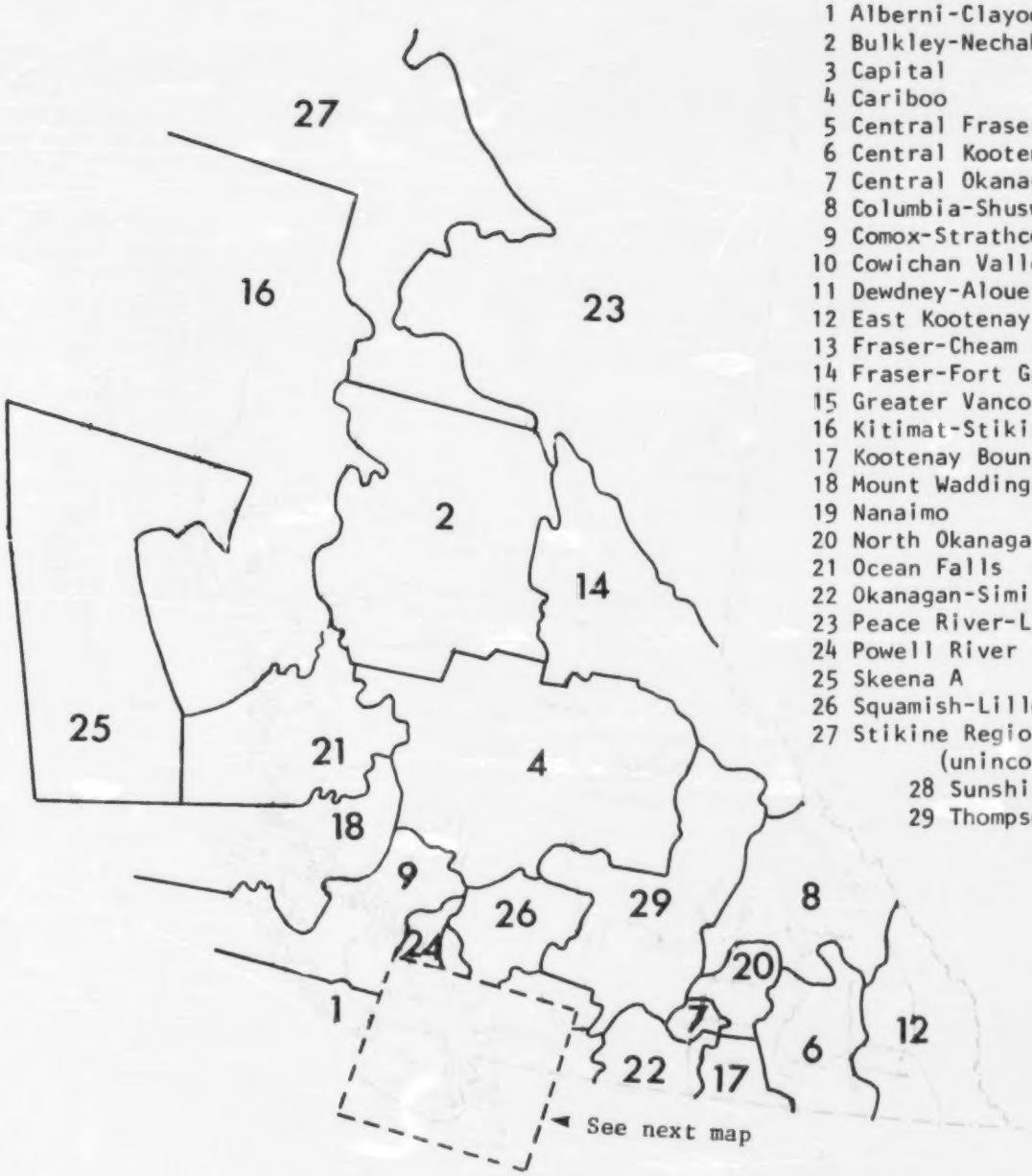
MANUFACTURING STATISTICS OF BRITISH COLUMBIA
BY CENSUS DIVISION 1972[1]

Division	Value of Shipments ($'000)	Number of Establishments	Number of Employees	Salaries and Wages ($'000)
Alberni-Clayoquot and Mount Waddington	187,063	46	4,710	42,403
Bulkley-Nechako	59,764	45	1,500	13,861
Capital	177,292	229	5,510	48,172
Cariboo	113,136	50	3,134	28,236
Central Fraser Valley	80,554	90	2,002	16,688
Central Kootenay	83,606	52	2,126	20,206
Central Okanagan	112,816	78	2,344	19,527
Columbia-Shuswap	60,964	43	1,958	18,136
Comox-Strathcona	137,824	43	2,742	28,948
Cowichan Valley	169,726	52	3,435	34,891
Dewdney-Alouette, Powell River, and Sunshine Coast	169,655	71	4,450	46,471
East Kootenay	82,415	55	2,073	18,424
Fraser-Cheam	52,812	55	1,275	9,703
Fraser-Fort George	276,289	82	5,441	53,888
Greater Vancouver	2,358,503	1,881	65,138	567,777
Kitimat-Stikine	167,893	25	4,097	45,430
Kootenay Boundary	92,735	38	4,902	38,737
Nanaimo	131,221	52	2,191	20,998
North Okanagan	669,020	68	2,010	16,981
Ocean Falls	15,510	5	367	4,021
Okanagan-Similkameen	53,710	78	1,566	11,458
Peace River-Liard	51,289	43	1,108	10,133
Skeena-Queen Charlotte	124,087	25	2,286	21,096
Squamish-Lillooet	54,224	17	1,356	13,409
Thompson-Nicola	138,149	92	3,811	35,694
TOTAL	5,020,254	3,315	137,237	1,255,357

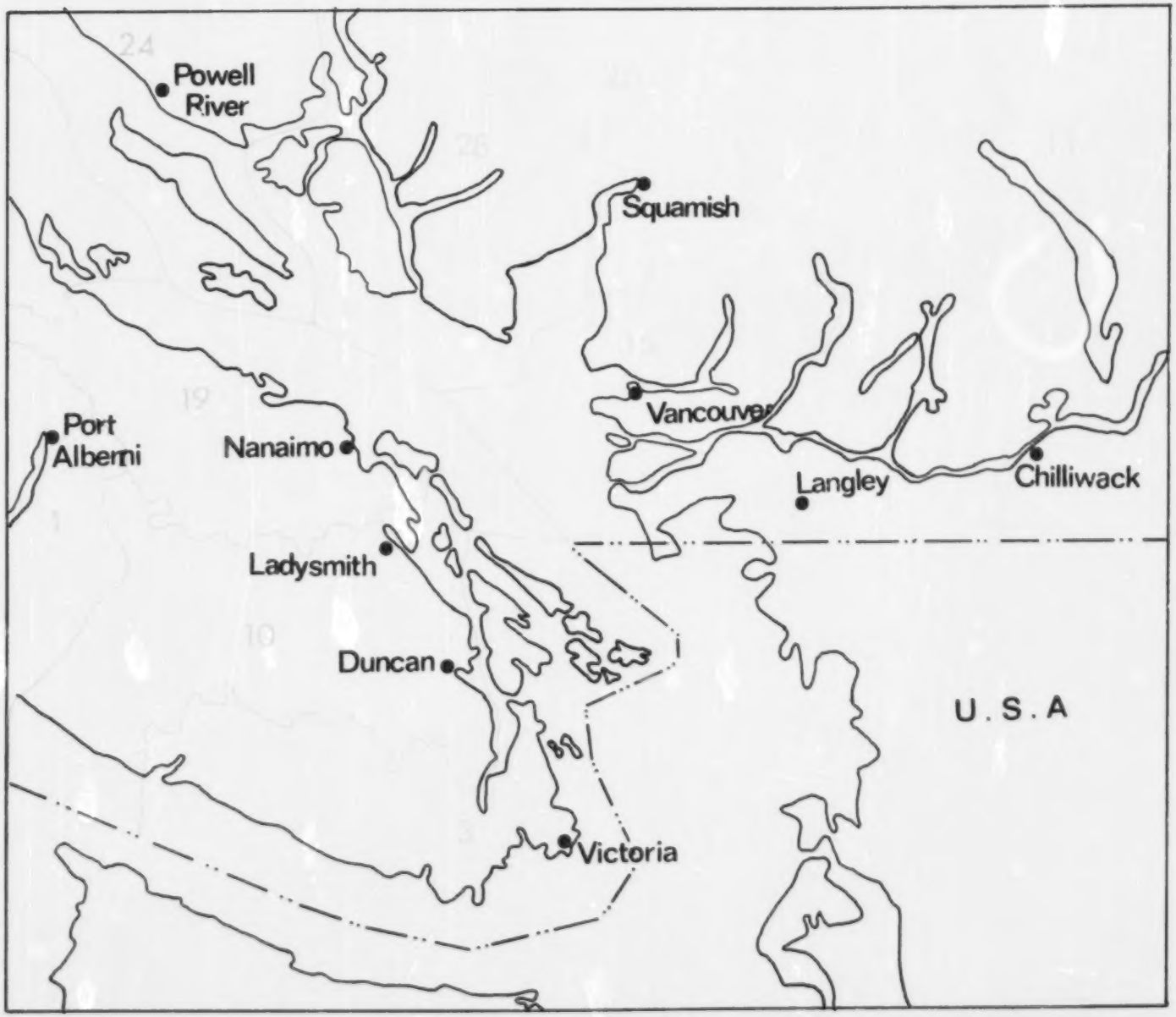
[1] Latest available.

A comparison of factory shipments by major manufacturing industries over the past twelve years (see table, page 47) indicates the continuous dominance by the forest-based industries of British Columbia's manufacturing sector. In 1976, the wood processing (lumber, plywood, etc.) and the paper and allied (pulp, newsprint, paperboard, etc.) manufacturing industries together produced an estimated 49.7 percent of the total value of Provincial factory shipments. In 1965, these two industry groups accounted for 46.9 percent of the value of factory shipments.

CENSUS DIVISIONS



1 Alberni-Clayoquot
2 Bulkley-Nechako
3 Capital
4 Cariboo
5 Central Fraser Valley
6 Central Kootenay
7 Central Okanagan
8 Columbia-Shuswap
9 Comox-Strathcona
10 Cowichan Valley
11 Dewdney-Alouette
12 East Kootenay
13 Fraser-Cheam
14 Fraser-Fort George
15 Greater Vancouver
16 Kitimat-Stikine
17 Kootenay Boundary
18 Mount Waddington
19 Nanaimo
20 North Okanagan
21 Ocean Falls
22 Okanagan-Similkameen
23 Peace River-Liard
24 Powell River
25 Skeena A
26 Squamish-Lillooet
27 Stikine Region (unincorporated)
28 Sunshine Coast
29 Thompson-Nicola


Powell River
Squamish
Vancouver
Port Alberni
Nanaimo
Langley
Chilliwack
Ladysmith
Duncan
U.S.A
Victoria

The remaining industry groups in the table on page 47 show some changes in relative importance. The most rapid growth in the 1965 to 1976 period is exhibited by the petroleum and coal products industries (up 407.3 percent), primarily as a result of the massive increases in energy prices since the fall of 1973. A very strong gain (263.7 percent) in the value of output is also exhibited by the nonmetallic minerals manufacturing industry (cement, asbestos, glass, etc.), primarily because of the growth in construction activity throughout British Columbia.

Other industries showing strong growth over the 1965-1976 period are transportation equipment, machinery, electrical products and metal fabricating. In many cases these industries service the forestry, mining, construction and transportation sectors and their growth parallels the tremendous development in those sectors. For example, logging machinery, sawmill and pulp mill equipment manufacturers have been successful in building equipment designed specially for those industries in British Columbia and are finding ready markets throughout the world.

While categories closely allied to forestry and mining continue to dominate manufacturing in British Columbia, an examination of industrial expansion in recent years does indicate some trend toward increasing diversification. Plants making welding devices, recreational vehicles, fishing and sail boats, fibreglass products, furniture, pollution control systems, cabinets, decorative plastics, concrete, aluminum windows, steel siding, winches, plastic pipe, and elevator components are just a few examples of new factory capacity built in the Province in recent years.

Of particular interest is the rapidly expanding production of mobile, modular and prefabricated homes. In 1975 approximately 1,400 modular and prefabricated homes were built in British Columbia, as well as over 2,500 mobile homes. This type of housing is rapidly increasing its percentage share of the housing stock in the Province, and is expected to continue its rapid growth.

Another observation is the growing diversity of locations for factories in British Columbia. A great percentage of industry has always been concentrated in the Lower Mainland and south Vancouver Island areas where the bulk of the population lives. Recent trends have found new factories built in the Okanagan, Kootenays, Columbia-Shuswap and Prince George regions. Introduction of substantial secondary manufacturing in these regions will contribute, through the multiplier effect, to the prosperity of the centres in which the factories locate.

Selling Value of Factory Shipments in British Columbia: 1965, 1970, 1973, 1974 and 1976

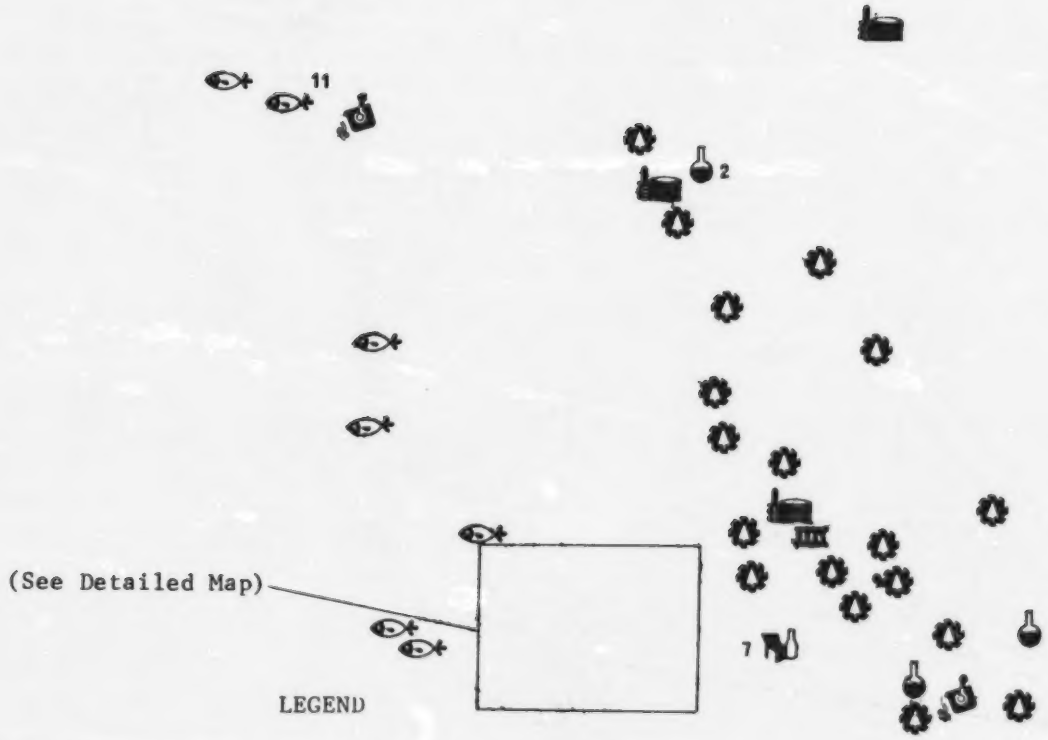
	1965		1970		1973		1974		1976		Percent change 1965-76
	Value $ Millions	Percent of total	Value $ Millions	Percent of total	Value $ Millions	Percent of total	Value $ Millions	Percent of total	Value $ Million	Percent of total	
Wood Manufacture	823.6	29.3	1,033.6	27.5	2,287.8	35.8	2,070.3	27.9	2,560.0	29.2	210.8
Paper and Allied	493.7	17.6	727.7	19.4	1,068.5	16.7	1,551.4	20.9	1,786.0	20.4	261.8
Food & Beverages	503.7	17.9	648.9	17.3	996.7	15.6	1,166.3	15.7	1,250.5	14.3	148.3
Petroleum & Coal Products	125.7	4.5	181.2	4.8	275.6	4.3	406.5	5.5	637.7	7.3	407.3
Metal Fabricating	145.8	5.2	235.1	6.3	304.1	4.8	412.9	5.6	436.8	5.0	200.0
Primary Metals Production	193.8	6.9	203.8	5.4	272.8	4.3	365.3	4.9	426.4	4.9	120.0
Transportation Equipment	106.3	3.8	139.0	3.7	288.6	4.5	361.3	4.9	335.5	3.8	215.6
Chemical and Chemical Products	98.1	3.5	108.3	2.9	148.0	2.3	183.5	2.5	264.2	3.0	169.3
Non-Metallic Mineral Products	57.3	2.0	89.3	2.4	153.5	2.4	175.0	2.4	208.4	2.4	263.7
Printing and Publishing	69.5	2.5	106.6	2.8	159.8	2.5	184.7	2.5	224.3	2.6	222.7
Machinery	53.1	1.9	81.1	2.2	152.7	2.4	184.8	2.5	168.7	1.9	217.7
Electric Products	35.6	1.3	70.5	1.9	87.6	1.4	108.5	1.5	138.5	1.6	289.0
Furniture and Fixtures	32.8	1.2	36.9	1.0	48.5	0.8	59.9	0.8	59.6	0.6	81.7
Clothing and Textiles	31.9	1.1	45.0	1.2	74.7	1.2	78.9	1.1	79.6	0.9	149.5
All other	35.7	1.3	53.6	1.4	75.2	1.2	101.8	1.4	177.5	2.0	397.2
Total	2,806.2	100.0*	3,760.6	100.0*	6,394.1	100.0*	7,411.1	100.0*	8,753.7	100.0*	211.9

* Totals may not add due to rounding.

Source: Statistics Canada.

MAJOR RESOURCE-BASED MANUFACTURING INDUSTRIES

(Exclusive of Pulp and Paper Mills and Sawmills)



Fish Products

Fruit and Vegetable Canning and Preserving

Veneer or Plywood

Smelters

Number indicated if more than one

Oil Refineries

Industrial Chemical Plants

Cement Plants

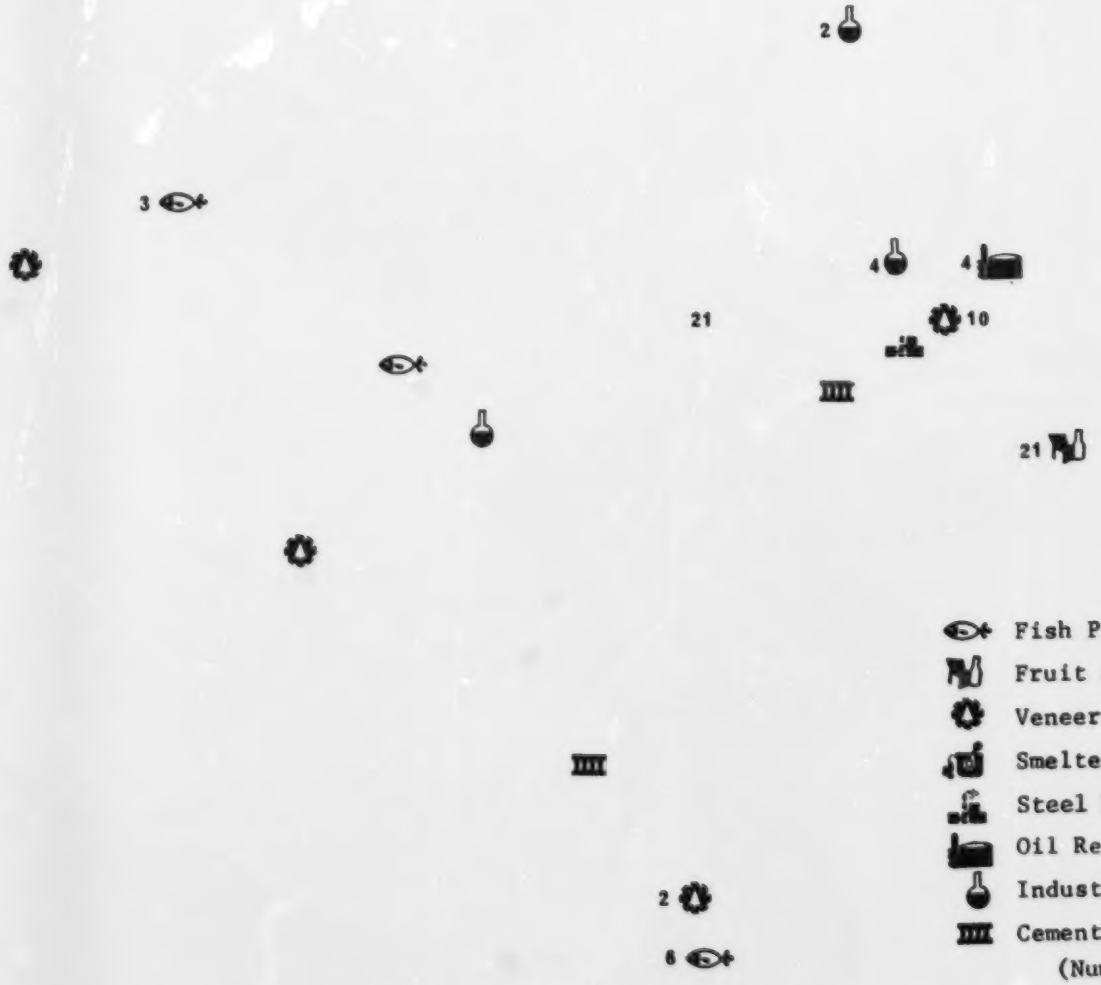
Pulp and paper mills shown on page 23

Sawmills shown on page 22

MAJOR RESOURCE-BASED MANUFACTURING INDUSTRIES

LOWER MAINLAND AND SOUTHERN VANCOUVER ISLAND

(Exclusive of Pulp and Paper Mills and Sawmills)



LEGEND

- Fish Products
- Fruit and Vegetable Canning and Preserving
- Veneer or Plywood
- Smelters
- Steel Mills
- Oil Refineries
- Industrial Chemical Plants
- III Cement Plants

(Number indicated if more than one)

TRADE

The rapid rate of British Columbia's industrial development is a result of the high demand, both foreign and Canadian, for the Province's primary and secondary products. Since a considerable portion of British Columbia's total trade enters foreign markets, international trade conditions will have a direct bearing on future industrial development.

Exports of British Columbia products in 1975 were estimated to be worth $3.87 billion, an increase of 10 percent over 1973. Since the end of World War II, the United States has been the Province's prime customer, taking almost 50 percent of the total in 1975. Japan's imports of British Columbia products represented 22.3 percent of the total in 1975. The United Kingdom, which imported 39 percent of the total value of British Columbia products exported in 1939, has steadily declined in relative importance, taking only 6.8 percent in 1975. The remainder of the European Common Market bought $450.8 million worth of British Columbia products in 1975 which represented 11.6 percent of the total.

LEADING MARKETS AND PRODUCTS - 1975

Ten Leading Markets	(millions of dollars)	Percent of Total
United States	$1,886.3	48.7
Japan	863.0	22.3
E.E.C.[1] (excluding U.K.)	450.8	11.6
United Kingdom	264.3	6.8
Australia	58.9	1.5
South America	47.4	1.2
Central America	40.0	1.0
Middle East	28.0	0.7
Peoples Republic of China	24.0	0.6
India	16.2	0.4
Total all British Columbia product exports	$3,872.3 million.[2]	
Twelve Leading Products		
Pulp - all types	869.5	22.5
Lumber - all types	780.2	20.1
Coal	334.7	8.6
Newsprint	268.0	6.9
Natural Gas	222.4	5.7
Copper - ores, concentrates & matte	201.0	5.2
Aluminum - pigs, ingots, slabs	97.1	2.5
Zinc	90.6	2.3
Salmon, fresh, frozen and canned	70.3	1.8
Molybdenum concentrates	61.0	1.6
Cedar shingles and shakes	60.3	1.6
Plywood - all types	42.8	1.1

[1] Belgium, Luxembourg, France, West Germany, Italy, Netherlands, Denmark, Ireland.

[2] Estimated through all Canadian customs ports.

Exports of all products through British Columbia customs ports increased from $959 million in 1960 to $4,653 million in 1973 and $6,358 million in 1975. The leading commodity exported through British Columbia customs ports in 1975 was natural gas, representing approximately 12 percent of the total value of exports through these ports. Also exported in 1975 were grain, flour, meal and cereal products valued at $921.5 million and coal, crude petroleum, natural gas and potash valued at $1,467.4 million from the Prairie provinces.

Imports through British Columbia customs ports reached $2,588.5 million in 1975. Leading commodities imported in 1975 were passenger automobiles, trucks and chassis, food, motor vehicle parts and aircraft and parts. Other important imports with a value of $6 million or more in 1975 included alumina, phosphate rock, nickel ores and concentrates, mahogany plywood, refined copper, a wide range of basic steel products, pipe, bicycles, motorcycles, tires, television sets, pleasure boats, and various types of industrial equipment.

The leading suppliers of imports in 1975 were the United States (56.9 percent) and Japan (18.9 percent). The following table shows the importance of the different geographic zones.

ORIGIN OF IMPORTS THROUGH BRITISH COLUMBIA CUSTOMS PORTS, 1975

Origin	Value ($'000)	Percent of Total
United States	1,473,247	56.9
United Kingdom	74,110	2.9
E.E.C. (excl. U.K.)	122,253	4.7
Eastern Europe	8,182	0.3
Other Europe	42,124	1.6
Middle East	968	--
Other Africa	6,477	0.3
Japan	487,993	18.9
Other Asia	160,827	6.2
South America	42,245	1.6
Central America & Caribbean	30,520	1.2
Australia	129,718	5.0
Other Oceania	9,841	0.4
Total	2,588,504	100.0

On a per capita basis, British Columbia products exported are estimated to be $1,576 (1975) compared to a Canadian average of $1,452. Approximately 55 percent of British Columbia's annual commodity output is marketed in other countries.

The seaports of British Columbia provide Canada's access to the Pacific Rim and for this reason the Lower Mainland area is one of the key shipping points on the west coast of North America. The development of giant tankers and bulk carriers, container ships, and self-loading automated vessels requiring very small crews has greatly increased the efficiency of ocean shipping and has made it possible to ship an increasing range of products over greater distances.

SELECTED PORTS

MAJOR COMMODITIES LOADED AT SELECTED BRITISH COLUMBIA PORTS

Port	Major Commodities
Bamberton	Cement
Blubber Bay	Limestone
Britannia	Sand and gravel
Campbell River	Pulp, newsprint
Chemainus	Lumber
Courtenay	Logs
Cowichan Bay	Wood products
Crofton	Pulp, paper, wood products
Gold River	Pulp, wood products
Kitimat	Aluminum wood products, pulp
Ladysmith	Logs
Marble Bay	Limestone
Nanaimo	Wood products, pulp newsprint
New Westminster	General products
Ocean Falls	Newsprint
Port Alberni	Pulp, paper, wood products
Port Mellon	Pulp
Powell River	Pulp, paper
Prince Rupert	Grain, wood products, pulp, logs, copper
Quatsino (Port Alice)	Pulp
Roberts Bank	Coal
Squamish	Wood products
Tasu	Iron ore
Tahsis	Wood products
Texada	Iron ore
Vananda	Limestone
Vancouver	General products
Victoria	General products

TRANSPORTATION

Railways

There are currently eight railway systems operating in British Columbia: the Canadian National Railways; the Canadian Pacific Railway Company; the British Columbia Railway; the Railway Freight Service of the British Columbia Hydro and Power Authority; the British Columbia Harbours Board Railway; the Northern Alberta Railways Company, the White Pass and Yukon Route and the Burlington Northern Railway. The combined length of operated mainline in the Province is 4,786 miles (7,702 kilometres), representing about 11 percent of the national total. In addition to this, four major United States lines interchange with Canadian lines at the border, or connect by barge. In 1975 railways in British Columbia loaded 498 thousand cars with 30.8 million tons (27.7 tonnes) of revenue freight. Railway revenue freight unloaded in 1975 was 43.0 million tons. Most of this traffic was handled in the Lower Mainland, which is the terminus for British Columbia's three largest rail systems: CNR, CPR and BCR.

The British Columbia Harbours Board Railway, completed in April 1970, heralded a new era in British Columbia resources development, marking the start of an almost continuous flow of coal from East Kootenay to the steel mills of Japan. Locomotives and specially-designed gondola cars built for the Canadian Pacific Railway Company move coal from Sparwood and Fording River to Roberts Bank. It takes each unit train 72 hours to make the round trip over the 700-mile route with a full load of 89,000 tons.

Computerized operations control systems are currently being introduced by Canadian National Railways and Canadian Pacific Railway Company in order to speed up traffic handling and increase traffic capacity in the Lower Mainland. Both companies have also recently announced large double tracking programs to improve access to the Lower Mainland and increase overall operating capacity between Alberta points and Vancouver.

Trucking and Highways

Many millions of dollars have been spent in British Columbia to extend and improve the highway system. There are 29,715 miles of highway, of which 9,691 miles are paved. The movement of freight by motor truck is an important component of British Columbia's transportation system.

Estimated operating revenues of Provincial common and contract motor carriers in 1974 (latest available) totalled $350.4 million.

During 1975 license year, approximately 884,250 passenger vehicles, 283,198 commercial vehicles and 19,043 commercial trailers were registered in the Province.

Ferries

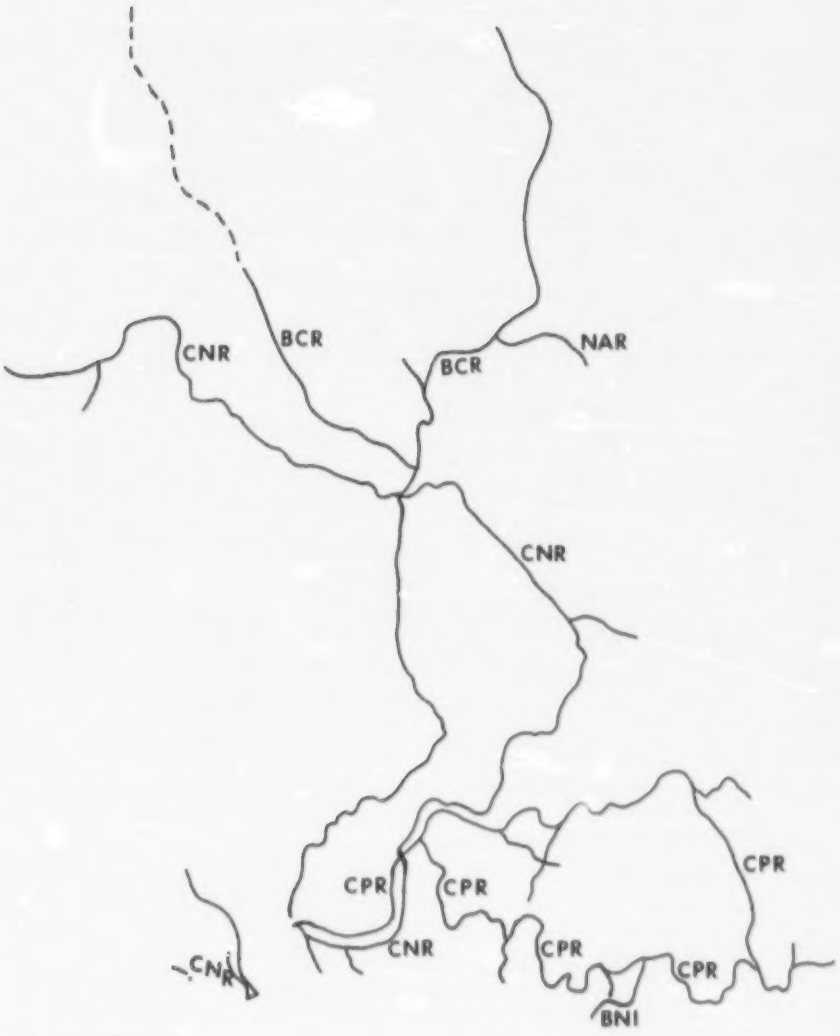
Since commencement in 1960, the British Columbia Ferries' service, now operated by the British Columbia Ferry Corporation, a Crown Corporation, has had unparalleled growth. From an initial two vessels, two ports and 190 employees,

MAIN RAILROAD LINES

LEGEND

——— Railways

- - - - - Under Construction



BCR British Columbia Railway

CNR Canadian National Railways

CPR Canadian Pacific Railway

BNI Burlington Northern Inc.

NAR Northern Alberta Railway

the service has grown to 26 ships, 22 terminals and 2,500 employees in the peak season. During the fiscal year ended March 31, 1976, over 9.9 million passengers and 3.8 million vehicles were carried.

Continued growth of ferry traffic has led to the installation of platform decks and to the lengthening of vessels by adding new midsections. The new "stretched" ships now have a capacity of 200 cars. More recently, a new truck and trailer ferry with a capacity of 58 truck trailers is now operating between Vancouver Island and the mainland. Two "super-ferries," each with a capacity of 362 vehicles and 1,300 passengers, will also be operating between the mainland and Vancouver Island in 1977.

Expansion of all major terminals at Tsawwassen, Nanaimo and North Vancouver is now underway to accommodate increased ferry traffic. A major new B.C. Ferries route supplemented by feeder services which will provide passenger and roll-on, roll-off freight service to north and mid-coast communnities has also been announced. A passenger ferry service across Burrard Inlet, connecting North Shore communities with downtown Vancouver will commence in 1977. Two, 400 passenger ferries as well as terminal and support facilities are in the final construction phase.

Black Ball Transport Inc. and Washington State Ferries operate between Vancouver Island and the United States; Canadian Pacific Steamships between Vancouver Island and the British Columbia mainland. The Princess Marguerite, operated by the British Columbia Steamship Company Ltd., a Crown Corporation, operates between Victoria and Seattle during the summer. Ferry service is also provided on 11 coastal routes by the Ministry of Highways, utilizing a fleet of 12 vessels. During the 1976 fiscal year 789,000 vehicles and 2.3 million passengers were carried.

Shipping

The major ports in British Columbia are Vancouver, New Westminster, Nanaimo and Prince Rupert. During 1975 vessels loaded 12.6 million tons of coastwise cargo and 32.4 million tons of deep-sea cargo at British Columbia ports. Deep-sea cargo loaded at Vancouver rose from 7.2 to 24.6 million tons between 1962 and 1975.

Construction commenced in 1968 on the Roberts Bank deep-sea terminal facilities which form the nucleus for the Roberts Bank Superport. The complex is presently handling the bulk export to Japan of some 8 million tons of British Columbia coal annually from the Kaiser and Fording coal mines in the East Kootenays. Plans by the National Harbours Board for the expansion of bulk loading facilities at Roberts Bank in conjunction with the development of 200 acres of foreshore as an industrial park now await completion of environmental studies. A new general cargo complex in Vancouver Harbour was completed in 1976 and a container terminal in that port is expected to be operational early in 1977. The new Fairview general cargo terminal in Prince Rupert has also been recently completed.

The Provincial Government announced in 1976 that Prince Rupert will become a major coal port if markets for metallurgical coal in northeast British Columbia can be secured. If constructed, the port could also handle

MAIN HIGHWAY AND FERRY ROUTES

sulphur, potash and coal from Alberta. The capital costs for the new port facilities and for improvements to the Canadian National Railways line between Prince George and Prince Rupert, in the order of $100 million, would be shared by the Federal and Provincial Governments upon joint agreement on the viability of the development.

Airlines

There are 93 air carriers based in British Columbia. Air Canada, CP Air, Qantas, United Airlines, Western Airlines, and Japan Airlines maintain regular schedules to world centres. The major maintenance facilities for domestic and international routes of CP Air, Canada's second largest airline, are at the Vancouver International Airport. There are 10 companies offering helicopter service and 26 British Columbia carriers with flying training licenses. Vancouver International Airport on Sea Island, which handled 4.3 million passengers in 1975, is currently undergoing a $48 million, 5-year expansion program. Plans are continuing for the addition of a third major runway. Victoria International Airport handled over 400,000 passengers in 1975. There are 10 airports in the Province which have full air traffic control facilities.

HUMAN RESOURCES

Population

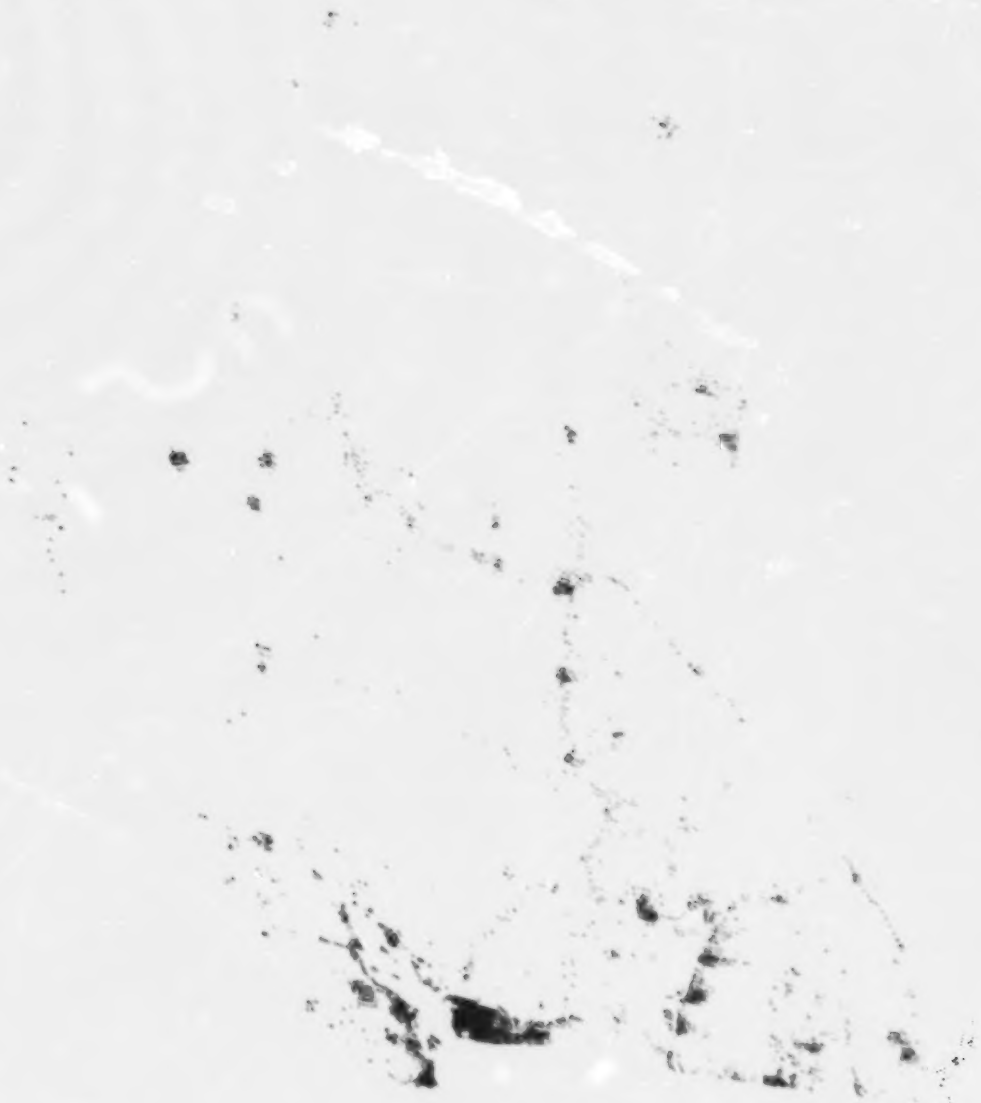
Over the 1961-1976 period, British Columbia had the highest rate of population increase of all Canadian provinces, increasing from 1,629,082 to 2,466,608. Net in-migration has traditionally accounted for almost two-thirds of this increase, but since 1974 has fallen off sharply due to the drawing effect of an expanding Alberta economy. For this reason population growth in British Columbia has slowed in recent years.

The greatest numerical increase in population over the 1961-76 period occurred in the Greater Vancouver census division, but the largest percentage increase occurred in Central Okanagan, Fraser-Fort George and Central Fraser Valley. The Kootenay Boundary census division experienced virtually zero growth while population in the Ocean Falls region actually declined over the 1961-1976 period.

POPULATION OF BRITISH COLUMBIA BY CENSUS DIVISIONS (REGIONAL DISTRICTS)
1961 - 1976

Census Divisions	1961	1971	1976	Percent changes 1971 - 1976
1. Alberni-Clayoquot	25,921	31,747	32,174	1.3%
2. Bulkley-Nechako	17,437	27,145	32,617	20.2
3. Capital	161,947	204,803	230,592	12.6
4. Cariboo	27,103	39,357	51,616	31.1
5. Central Fraser Valley	37,601	58,085	87,927	51.4
6. Central Kootenay	41,349	44,791	48,962	9.3
7. Central Okanagan	27,460	50,177	71,254	42.0
8. Columbia-Shuswap	20,067	30,641	35,569	16.1
9. Comox-Strathcona	30,876	47,345	57,186	20.8
10. Cowichan Valley	30,749	38,988	47,100	20.8
11. Dewdney-Alouette	29,835	40,096	52,430	30.8
12. East Kootenay	29,739	39,720	46,450	16.9
13. Fraser-Cheam	38,016	46,097	51,430	11.5
14. Fraser-Fort George	31,726	64,364	79,616	23.7
15. Greater Vancouver	790,741	1,028,334	1,085,242	5.5
16. Kitimat-Stikine	23,031	37,326	38,718	3.7
17. Kootenay Boundary	31,409	31,396	31,706	1.0
18. Mount Waddington	9,131	10,408	12,476	19.9
19. Nanaimo	33,076	48,006	61,879	28.9
20. North Okanagan	25,694	34,039	46,860	37.7
21. Ocean Falls (Central Coast)	6,260	4,215	4,184	(-)0.7
22. Okanagan-Similkameen	33,486	42,752	51,520	20.5
23. Peace River-Liard	31,352	43,966	44,842	1.9
24. Powell River	14,099	18,536	19,648	6.0
25. Skeena-Queen Charlottes	17,592	22,299	22,662	1.6
26. Squamish-Lillooet	9,960	13,081	15,769	20.5
27. Stikine (Unorganized)	1,224	1,470	1,545	5.1
28. Sunshine Coast	7,325	9,655	12,508	29.5
29. Thompson-Nicola	44,876	75,752	92,126	21.6
BRITISH COLUMBIA TOTAL	1,629,082	2,184,621	2,466,608	12.9

POPULATION DISTRIBUTION



LEGEND

● 3000 PERSONS
• 1500 PERSONS
◦ 300 PERSONS

Labour Force

British Columbia's labour force also grew more rapidly than in any other province in Canada due to the heavy in-migration into the Province as well as to the rapid increase in the female participation rate (percentage of working-age females in the labour force).

The Province's labour force (defined essentially as all persons of working age actively seeking work) reached 1,135 thousand persons in 1976, of which 709 thousand were male and 426 thousand were female. In 1975 the annual average number of persons in the labour force was 1,103 thousand, consisting of 693 thousand males and 410 thousand females. The growth of the female component of the labour force has far outpaced the growth of the male component.

LABOUR FORCE STATISTICS, BRITISH COLUMBIA

Category	1961	1966	1976
Labour Force (000's)	575	717	1,135
Employed (000's)	527	683	1,038
Unemployed (000's)	48	34	97
Male Participation Rate	76.6	79.1	77.7
Female Participation Rate	27.0	34.5	45.7

Salaries and wages paid in British Columbia are generally higher than the Canadian average. Average weekly earnings in 1976 were $259.52 in British Columbia compared with the average for Canada as a whole of $228.04. This wage differential has existed for several decades, and is one of the primary reasons for historically high levels of immigration to the Province.

LABOUR FORCE AND AVERAGE WEEKLY WAGES AND SALARIES, BRITISH COLUMBIA, 1976

Sector	Labour Force (000's)	Labour Force % of Total	Average Weekly * Wages & Salaries ($)
Agriculture	20	1.8	n.a.
Fishing			n.a.
Forestry	50	4.4	329.17
Mining			327.13
Manufacturing	186	16.4	283.37
Construction	91	8.0	363.56
Transportation, Communications & Utilities	117	10.3	282.92
Trade	210	18.5	210.39
Finance, Insurance & Real Estate	64	5.6	217.94
Service	317	27.9	167.55
Public Administration	74	6.5	n.a.
Other (unclassified)	6	0.5	n.a.
TOTAL	1,135	100.0	256.34

* First eight months only, latest available at time of publication.

One of the most important attributes of any labour force is its quality of skills and education. British Columbia's labour force is one of the most versatile and best-educated in Canada. Approximately 34 percent of the labour force in this Province in 1976 had at least some post-secondary education compared with 32 percent for Canada as a whole.

BRITISH COLUMBIA LABOUR FORCE BY LEVEL OF EDUCATION, 1976

Education Level	Labour Force (000's)	% of Total
0-8 years	134	11.8
Some high school and no post-secondary	612	53.9
Some post-secondary	136	12.0
Post secondary certificate or diploma	140	12.3
University degree	113	10.0
TOTAL	1,135	100.0